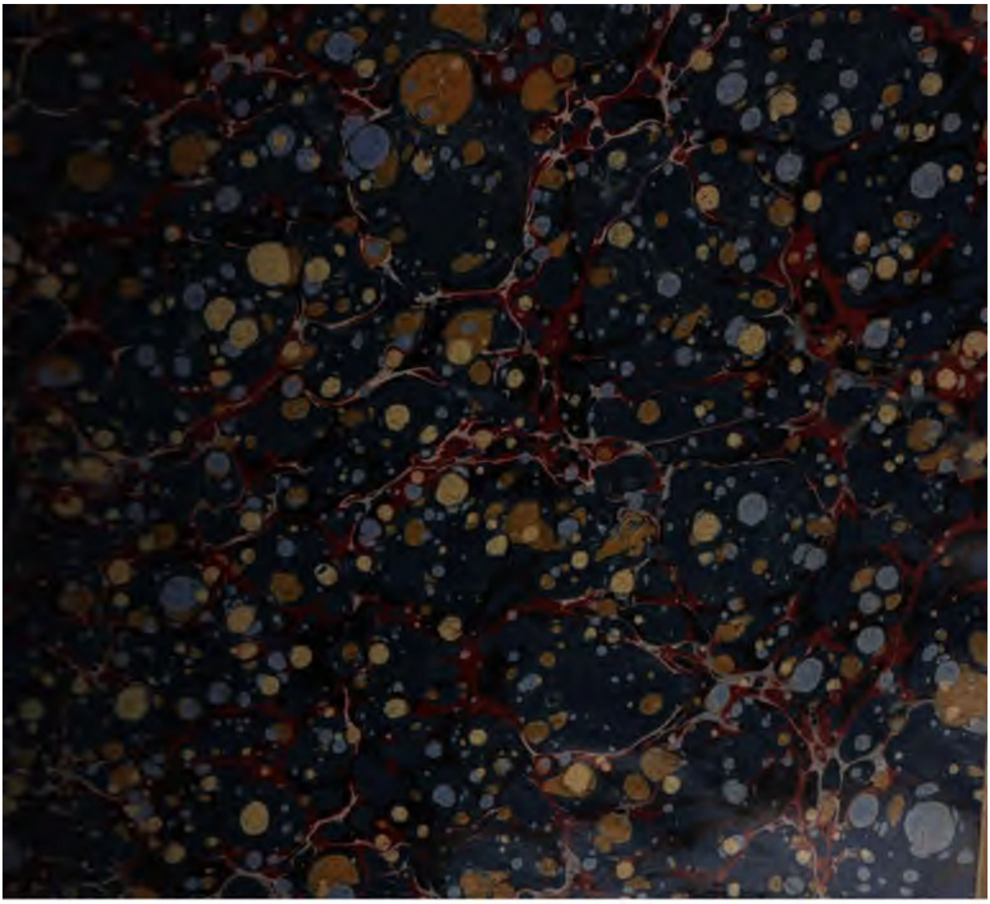

SMITHSONIAN

MISCELLANEOUS COLLECTIONS.

VOL. XXXII.

"EVERY MAN IS A VALUABLE MEMBER OF SOCIETY WHO BY HIS OBSERVATIONS, RESEARCHES, AND EXPERIMENTS PROCURES KNOWLEDGE FOR MEN."—SMITHSON.

WASHINGTON:
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1888.

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S. P. LANGLEY,
Secretary S. I.

CONTENTS OF VOL. XXXII

SMITHSONIAN MISCELLANEOUS COLLECTIONS.

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THE CONSTANTS OF NATURE.

PART I.

A TABLE OF SPECIFIC GRAVITY FOR SOLIDS AND LIQUIDS.

[NEW EDITION. REVISED AND ENLARGED.]

BY

FRANK WIGGLESWORTH CLARKE,

Chief Chemist U. S. Geological Survey.

WASHINGTON:

PUBLISHED BY THE SMITHSONIAN INSTITUTION.

1888.

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JUDD & DETWEILER,
AT WASHINGTON, D. C.

TABLE OF CONTENTS.

INTRODUCTION.

Early in 1872 I submitted to the Secretary of the Smithsonian Institution, the late Joseph Henry, a manuscript entitled "A Table of Specific Gravities, Boiling Points, and Melting Points for Solids and Liquids." It was accepted for publication, and in February, 1874, the printed copies were ready for distribution. For years previously Professor Henry had had in mind the publication of a series of similar tables somewhat upon the plan long before suggested by Babbage, and accordingly my modest work was given the somewhat ambitious title of "The Constants of Nature" and made the first part of the proposed undertaking. Subsequently Parts II, III, and V were furnished by myself and Part IV by Professor G. F. Becker, and in 1876 I also published a supplement to Part I.

The following tables form, in effect, a new edition of Part I, completely revised, rearranged, and brought down as nearly as possible to the date of printing. They are, however, modified by the omission of boiling and melting points, except when such data seemed essential to the proper identification of a compound, on the ground that the magnificent tables of Professor Carnelley already supply that want. I have limited myself to specific gravity alone, following in the main the plan of arrangement adopted in my earlier work, with such changes as were made necessary by the later developements of chemical thought. Constitutional formulæ have been used, not according to any fixed rule, but according to convenience, and their adoption has been governed, to some extent, by the limitations of the octavo page. All other details have been subject to the same limitations, and it is hoped that their absence will be compensated for by the almost uniformly full references to literature. Some data could not be traced back to their original sources, at least not without unwarrantable labor, and most of these formed part of an early table prepared nearly twenty years ago for my own private use. A few determinations are accredited to standard works of reference, such as Watts' Dictionary, Dana's Mineralogy, and the like, and many have been drawn from the Jahresbericht. Absolute completeness cannot, of course, be claimed, and in some directions it has not even been attempted. Among minerals, only those having approximately definite formulæ are given, and indefinite substances have been excluded altogether. The tables aim at reasonable completeness only as regards *artificial substances of definite constitution*, and all else is gratuitous. A good many determinations of specific gravity have been unearthed from doctoral dissertations, school programmes, and similar foes of the bibliographer, and doubtless other data so printed have escaped my notice altogether. There is a weakness of human nature which, masquerading as patriotism, sometimes leads men of science to bury valuable researches in obscure local publications, and a compiler may never flatter himself that no such paper has eluded his vigilance. I shall be glad to receive notice of all omissions, and will try to rectify such or other errors in future supplements or appendices.

A word in conclusion as to the extent of the table. They contain the specific gravities of 5,227 distinct substances and 14,465 separate determinations. The original edition gave only 2,263 substances, to which nearly 700 were added in the supplement. The increase is a noteworthy indication of existing chemical activity.

F. W. CLARKE.

WASHINGTON, *June* 20, 1888.

EXPLANATORY NOTES.

In references to literature the following abbreviations have been used. In each case, as far as practicable, series, volume, and page are indicated, the page reference signifying, according to circumstances, either the first page of the paper cited, or else the actual page upon which the determination is given. The former rule applies to pages containing many data; the latter to cases in which the specific gravity datum is merely incidental.

A. C. J.—American Chemical Journal.
A. C. P.—Annalen der Chemie und Pharmacie.
A. J. S.—American Journal of Science.
Am. Chem.—American Chemist.
Am. J. P.—American Journal of Pharmacy.
Am. Phil. Soc.—American Philosophical Society.
Ann.—Annales de Chimie et de Physique.
Ann. Phil.—Annals of Philosophy.
Arch. Pharm.—Archiv für Pharmacie.

B. D. Z.—Die Beziehungen zwischen Dichte und Zusammensetzung bei festen und liquiden Stoffen. Leipzig, 1860.
Bei.—Beiblätter zu den Annalen der Physik und Chemie.
Ber.—Berichte der Deutschen Chemischen Gesellschaft.
B. H. Ztg.—Berg-und hüttenmännische Zeitung.
B. J.—Berzelius' Jahresbericht.
Böttger.—Tabellarische Uebersicht der specifischen Gewichte der Körper. Frankfort, 1837.
B. S. C.—Bulletin de la Société Chimique.
B. S. M.—Bulletin de la Société Française de Mineralogie.
Bull. Acad. Belg.—Bulletins, Academie Royale de Belgique.
Bull. Geol.—Bulletin de la Société Géologique.
Bull. Heb.—Bulletin Hebdomadaire de l'Association Scientifique de France.
Bull. U. S. G. S.—Bulletin of the U. S. Geological Survey.

C. C.—Chemisches Centralblatt.
C. G.—Chemical Gazette.
C. N.—Chemical News.
C. R.—Comptes Rendus.

...ler's Polytechnisches Journal.
... "Dichtigkeitsmessungen." Heidelberg, 1878.

...urnal.

F. W. C.—This abbreviation indicates the work of students under the direction of F. W. Clarke.

G. C. I.—Gazzetta Chimica Italiana.
Geol. Mag.—Geological Magazine.
G. F. F.—Geologiska Föreningar Förhandlingar.
Gilb. Ann.—Gilbert's Annalen.
Gm. H.—Gmelin's Handbook of Chemistry. Cavendish Society edition.

In. Diss. or Inaug. Diss.—Inaugural or Doctoral Dissertation. Always prefixed by the name of the university from which the dissertation was published.

J.—Jahresbericht über die Fortschritte der Chemie.
J. A. C.—Journal of Analytical Chemistry.
J. C. S.—Journal of the Chemical Society.
J. P. C.—Journal für Praktische Chemie.
J. Ph. Ch.—Journal de Pharmacie et de Chimie.
J. R. C.—Jahresbericht über die Fortschritte * * * der reinen Chemie.

M. C.—Monatshefte für Chemie.
M. C. S.—Memoirs of the Chemical Society.
Mem. Acad. Belg.—Mémoires, Academie Royale de Belgique.
Min. Mag.—Mineralogical Magazine.
M. P. M.—Mineralogische Petrographische Mittheilungen.
M. St. P. Sav. Et.—Mémoires de Savants Etrangers, St. Petersburg Academy.

N. J.—Neues Jahrbuch für Mineralogie, etc.
Nich. J.—Nicholson's Journal.

Öf. Ak. St.—Öfversigt af K. Vet. Akad. Förhandlingar, Stockholm.

P. A.—Poggendorff's Annalen. For convenience, the second series under Wiedemann is covered by the same abbreviation.
P. des C.—Pesanteur Spécifique des Corps. Brisson, Paris, 1787. A German edition by Blumhof appeared at Leipzig in 1795.
P. M.—Philosophical Magazine. London, Edinburgh, and Dublin.
Proc. Amer. Acad.—Proceedings of the American Academy, Boston.
Proc. Amer. Asso.—Proceedings of the American Association for the Advancement of Science.
P. R. S.—Proceedings of the Royal Society. London.
P. R. S. E.—Proceedings of the Royal Society. Edinburgh.
P. R. S. G.—Proceedings of the Royal Society. Glasgow.
P. T.—Philosophical Transactions.

Q. J. S.—Quarterly Journal of Science.

R. T. C.—Recueil des Travaux Chimiques.

Schw. J.—Schweigger's Journal.

S. W. A.—Sitzungsberichte der K. K. Akademie der Wissenschaften. Wien.

Thurston's Report.—Report of the Board on Testing Iron, Steel, and other Metals. Washington, 1881.

U. N. A.—Upsala, Nova Acta.

V. H. V.—Verhandlungen des naturhistorisches Vereines. Bonn.

Watts' Dict.—Watts' Dictionary of Chemistry.

Z. A. C.—Zeitschrift für analytische Chemie.
Z. C.—Zeitschrift für Chemie.
Z. G. S.—Zeitschrift der Deutschen Geologischen Gesellschaft.
Z. K. M.—Zeitschrilt für Krystallographie und Mineralogie.

A TABLE OF SPECIFIC GRAVITIES

FOR

SOLIDS AND LIQUIDS.

I. THE ELEMENTS.

Name.	Specific Gravity.	Authority.
Hydrogen. Liquefied	.025 } 0°	
" "	.026	Cailletet and Hautefeuille. C. R.
" "	.032 } −23°	92, 1086.
" "	.033	
" (Occluded by palladium.)	.620 to .623	Dewar. P. M. (4), 47, 334.
Lithium	.578 }	
"	.589	Bunsen. J. 8, 324.
Sodium	.9348	Davy. P. T. 1808, 21.
"	.97223, 15°	Gay Lussac and Thénard. See Böttger.
"	.985	Schröder. J. 12, 12.
"	.97	Troost and Hautefeuille. C. R. 78, 970.
"	.9743, 10° }	Baumhauer. Ber. 6, 655.
"	.9735, 13°.5	
"	.972	Quincke. P. A. 135, 642.
"	.7414, at boiling point	Ramsay. Ber. 13, 2145.
"	.9725, 0° }	
"	.9686, 16°.9, m. of 3	Hagen. P. A. (2), 19, 436.
"	.9287, 97°.6, fused	
Potassium	.865, 15°	Gay Lussac and Thénard. Ann. 66, 205.
"	.874	Sementini. See Böttger.
"	.8427, fused	Playfair and Joule. M. C. S. 3, 76.
"	.8750, 18° }	Baumhauer. Ber. 6, 655.
"	.8766, 18°	
"	.8642, 0° }	Hagen. P. A. (2), 19, 436.
"	.8298, 62°.1, fused	
Rubidium	1.52	Bunsen. J. 16, 185.
Cæsium	1.872 } 15°	
"	1.884	Setterberg. A. C. P. 211, 215.
"	1.886	
Glucinum	2.1	Debray. J. 7, 336. [384.
"	1.64 (Cor. for impurities).	Nilson and Petterson. Ber. 11,
"	1.85, 20°	Humpidge. P. R. S. 39, 1.
Magnesium	2.24, m. of 2	Playfair and Joule. M. C. S. 3, 73.
"	1.7430, 5°	Bunsen. J. 5, 363.
"	1.69 } 17°	Kopp.
	1.71	
	1.75	Deville and Caron. J. 10, 148.
	1.77, 0°	H. Wurtz. Am. Chem., Mar. 1876.

Name.	Specific Gravity.	Authority.
Zinc	6.861	Brisson. P. des C.
"	6.862	Berzelius. See Böttger.
"	6.9154	Karsten. Schw. J. 65, 394.
"	6.939, m. of 3	Playfair and Joule. M. C. S.
"	7.03 to 7.20	Bolley. J. 8, 387.
"	6.966 } 12°	Schiff. A. C. P. 107, 59.
"	6.975 } 12°	
"	7.21	Daniell.
"	7.146	Wertheim.
"	6.895	Mallet. D. J. 85, 378.
"	7.2	Roberts and Wrightson. B[illegible]
" Ordinary	7.1812 } 0°	Kalischer. Ber. 14, 2750.
" Crystalline	7.1841 } 0°	
" Fused	6.512, m. of 3	Playfair and Joule. M. C. S.
" "	6.48 } Two methods	Roberts and Wrightson. An[illegible] 30, 181.
" "	6.55 } Two methods	
" "	6.900	Quincke. P. A. 135, 642.
" Solid	7.119, 0°	
" Not pressed	7.142, 16°	Spring. Ber. 16, 2724.
" Once "	7.153, 16°	
" Twice "	7.150, 16°	
Cadmium. Cast	8.6040	Stromeyer. Schw. J. 22, 36[illegible]
" Hammered	8.6944	
"	8.670	Children. See Böttger.
"	8.650	Herapath. P. M. 64 (1824)
"	8.6355	Karsten. Schw. J. 65, 394.
" Wire	8.6689	Baudrimont. J. P. C. 7, 2[illegible]
" Pure	8.540	Schröder. P. A. 107, 113.
" "	8.566	
" "	8.667	
" Commercial	8.648	
"	8.655, 11°	Matthiessen. J. 13, 112.
"	8.627, 0°	Quincke. P. A. 135, 642.
" Fused	8.394	
" Not pressed	8.642, 17°	Spring. Ber. 16, 2724.
" Once "	8.667, 16°	
" Twice "	8.667, 16°	
"	8.6681, 0°	Vicentini and Omodei. Be[illegible] 769.
"	8.3665, 318°, solid	
"	7.989, 318°, molten	
Mercury. Solid	14.391	Schulze.
" "	14.383, —40°	Hällström. Gilb. Ann. 20, 4[illegible]
" "	15.745	
" "	14.485, —60°	Biddle. P. M. 30, 153.
" "	14.0, about	Kupffer and Cavallo.
" "	15.19	Joule. J. 16, 283.
" "	14.1932	Mallet. J. C. S. 34, 27[illegible].
" Liquid	13.5681	Brisson. P. des C.
" "	13.575	Fahrenheit. See Böttger.
" "	13.550	Muschenbroek. " "
" "	13.568, 15°.5	Crichton. P. M. 16, 48.
" "	13.613, 10°	Biddle. P. M. 30, 152.
" "	13.0078, 0°	Hällström. Gilb. A[illegible]
" "	12.810, boiling	
" "	13.586	Scholz. See Bö[illegible]
" "	13.567	Kummer. "
" "	13.5880, 4°	Kupffer.
" "	13.585, 20°	

NAME.	SPECIFIC GRAVITY.	AUTHORITY.
rcury. Liquid	13.588597	Biot and Arago. Biot's "Traité de Physique."
" "	13.5592	Karsten. Schw. J. 65, 394.
" "	13.582, 5°—10°	Regnault. P. A. 62, 50.
" "	13.570, 10°—15°	
" "	13.558, 15°—20°	
" "	13.59599, 0°	Regnault. Ann. (3), 14, 236.
" "	13.59602	
" "	13.59578	
" "	13.595, 0°	Kopp. J. 1, 445.
" "	13.573, 15°	Holzmann. J. 13, 112.
" "	13.608, 12°	Schiff.
" "	13.584, 16°.6	Stewart. P. T. 1863, 430.
" "	13.5953, 0°	Volkmann. Ber. 14, 1708.
lcium	1.566	Matthiessen. J. 8, 324.
"	1.584	
"	1.584	
"	1.55	Liés-Bodart and Jobin. J. 11, [126.
"	1.6 to 1.8	Caron. J. 13, 119.
trontium	2.504	Matthiessen. J. 8, 324.
"	2.580	
"	2.4	Franz. J. P. C. 107, 253.
arium	4.00, about	Clarke. Gilb. Ann. 55, 28.
"	3.75	Kern. C. N. 31, 243.
oron.* Cryst.	2.68	Wöhler and Deville. Ann. (3), [52, 63.
" AlB_{12}	2.5345, 17°.2, m. of 2	Hampe. A. C. P. 183, 85 and 96.
" $C_2Al_3B_{48}$	2.618, 13°	
" "	2.611, 20°	
luminum. Cast	2.50	Wöhler. J. 7, 327.
" Hammered	2.67	
"	2.583, 4°	Mallet. P. T. 1880, 1025.
"	2.688	Barlow. J. C. S. April, 1883.
" Com'l wire	2.8067	A. P. Corbit. Communicated by R. B. Warder.
" " foil	2.8075	W. Bishop.
Gallium	5.935, 28°	Boisbaudran. C. R. 83, 611.
"	5.956, 24°.45	
Indium. In grains	7.110, 20°.4	Reich and Richter. J. 17, 241.
" "	7.147	
" Laminæ	7.277	
"	7.362, 15°	Winkler. J. 18, 233.
"	7.421, 16°.8	" J. 20, 262.
Lanthanum	6.049	Hillebrand and Norton. P. A. 156, 473.
"	6.163	
Cerium	6.628	Hillebrand and Norton. P. A. 156, 471.
" After fusion	6.728	
Didymium	6.544	Hillebrand and Norton. P. A. 156, 474.
Thallium	11.862	Lamy. J. 15, 180.
" Wire	11.808, 11°	De la Rive. J. 16, 248.
" Cast	11.853	
"	11.777	Werther. J. 17, 247.
"	11.900	
" Cast	11.81	Crookes. J. C. S. 1864, 112.
[illegible]	11.88	
[illegible]	11.91	

*alled "crystallised boron" is never pure. Its composition is shown

Name.		Specific Gravity.	Authority
Carbon.	Diamond	3.550	Brisson. P. des C.
"	"	3.492	Grailich. Bull. Geol.
"	"	3.520	Mohs. Min. 2, 306.
"	"	3.334	Shepard.
"	"	3.5	Berzelius. A. C. P.
"	"	3.55	Pelouze. Watts' Dic
"	"	3.5295	Thomson. Min. 1, 46
"	"	3.53	Schafarik. P. A. 139
"	"	3.51432, 18°.1	Schrötter. J. 24, 257.
"	"	3.5143	Schrauf. J. 24, 257.
"	"	3.529, 15°	Dufrenoy. J. 24, 258
"	"	3.51835, m. of 5	Baumhauer. J. C. S.
"	Graphite	2.144	Breithaupt. See Bött
"	"	2.229	Kenngott. S. W. A.
"	"	2.273	Regnault. Gm. H.
"	"	2.14	Fuchs. J. P. C. 7, 35
"	"	2.5	Berzelius. A. C. P. 4
"	"	2.3285	Karsten. Schw. J. 65
"	"	2.3162	Poggendorff. P. A. E 1848, 363.
"	"	2.25 } Purified	Brodie. J. 12, 68.
"	"	2.26 }	
"	"	2.105 }	Mené.* J. 20, 972.
"	"	2.585 }	
"	"	1.802 } 20°, purified	Löwe. J. 8, 297.
"	"	1.844 }	
"	Gas carbon	2.35	Graham.
"	"	2.08	Baudrimont.
"	"	1.885	Mené. J. 20, 972.
"	"	1.723, 1.821, 1.982 }	From different parts of
"	"	2.056, 2556, 18° }	Meyn. J. P. C. 26,
"	Sugar charcoal	1.81 }	Monier. Bull. Heb. 1
"	"	1.85 }	
"	Charcoal	1.76	Colquhoun.
"	"	2.10 from alcohol	Scholz. See Böttger.
"	"	1.84	Griffith. " "
"	"	1.80	Playfair. Proc. Roy.
"	Lamp-black	1.78	Baudrimont.
"	"	1.723 from kerosene }	Hallock. Bull. 42, U.
"	"	1.780 from coal-tar naphtha }	
"	"	1.752 from natural gas }	
"	"	1.773 from dead oil }	
Silicon.	Graphitoidal	2.49, 10°	Wöhler. J. 9, 347.
"	"	2.493	Harmening. P. A. 97
"	"	2.004 }	Winkler. J. 17, 208,
"	"	2.194 }	
"	"	2.197 }	
"	"	2.387	Miller. Proc. Roy. 4, 241.
"	Adamantine	2.48, m. of 6	Playfair. Proc. Roy. 4, 241.
Germanium		5.469, 20°.4	Winkler. J. P. C.
Zirconium		4.15	Troost. J. 18, 182.
Tin		7.291	Brisson. P. des C.
"		7.285	Musch[illegible]

* The extremes of 20 determinations made on specimens f

Name.	Specific Gravity.	Authority.
Tin	7.2914	Guyton. Nich. J. (1), 1, 110.
"	7.278, 15°.5	Crichton. P. M. 16, 48.
"	7.2911, 17°	Kupffer. Ann. (2), 40, 285.
"	7.285	
"	7.600	Herapath. P. M. 64, 321.
"	7.5565	
"	7.2905	Karsten. Schw. J. 65, 394.
" Wire	7.3395	Baudrimont. J. P. C. 7, 278.
"	7.306, m. of 4	Playfair and Joule. M. C. S. 3, 68.
" Crystallized	7.178	W. H. Miller. P. M. (3), 22, 263.
" Cast	7.298	
"	7.3043	Kopp. A. C. P. 93, 129.
" Cooled slowly	7.373	St. Claire Deville. P. M. (4), 11, 144.
" " quickly	7.239	
"	7.294, 13°	Matthiessen. J. 13, 112.
"	7.291	Mallet. D. J. 85, 378.
" Reduced by H. from $SnCl_2$	7.143 7.166	
" Precipitated	7.195	Rammelsberg. Ber. 3, 725.
" Remelted	7.310	
"	7.5	Roberts and Wrightson. Bei. 5, [817.
"	7.267, 0°	Quincke. P. A. 135, 642.
"	7.25	E. Wiedemann. P. A. (2), 20, 232.
" Allotropic	5.809, 5.781, 19° 5.802, 19.5	
" Allotropic converted by heating.	7.280, 15° 7.304, 19°	Two lots. Schertel. J. P. C. (2), 19, 322.
" Allotropic	6.020, 6.002, 19° 5.930, 12°.5	
" Allotropic after reconversion.	7.24 —7.27	
" Rhombic cryst.	6.52	Trechmann. Z. K. M. 5, 625.
" " "	6.56	
" Ordinary	7.387	Richards. Tr. Amer. Inst. Min. Eng. 11, 235.
" Allotropic	6.175	
" Not pressed	7.286, 10°	
" Once "	7.292, 10°.25	Spring. Ber. 16, 2724.
" Twice "	7.296, 11°	
"	7.3006, 0°	
"	7.1835, 226°, solid	Vicentini and Omodei. Bei. 11, 769.
"	6.988, 226°, molten	
" Fused	6.934, m. of 3.	Playfair and Joule. M. C. S. 3, 75.
" "	7.025 Two methods	Roberts and Wrightson. Ann. (5), 30, 181.
" "	6.974	
" "	7.144	Quincke. P. A. 135, 642.
Lead	11.445	Muschenbroek. See Böttger.
"	11.352	Brisson. P. des C.
"	11.207	Böckmann. See Böttger.
"	11.1603	Guyton. Ann. 21, 3.
"	11.3303	Kupffer. Ann. (2), 40, 292.
"	11.346, 15°.5	Crichton. P. M. 16, 48.
" Wire	11.3775	Baudrimont. J. P. C. 7, 278.
"	11.352	Herapath. P. M. 64, 321.
	11.3888	Karsten. Schw. J. 65, 394.
	11.231, m. of 4	Playfair and Joule. M. C. S. 3, 68.
	11.370, 0° 11.3525, 18°	Reich. J. P. C. 78, 328.
	11.395, 4°	Streng. J. 13, 187.

NAME.	SPECIFIC GRAVITY.	AUTHORITY.
Lead	11.361, 70°	Mallet. A. J. S. (3), 8, 212.
" Cooled slowly from fusion.	11.254	St. Claire Deville. P. M. (4), 11, 144.
" Cooled quickly from fusion.	11.363	"
" Electrolytic	11.542	"
" Electrolytic, fused and cooled quickly.	11.225	"
"	11.376, 14°	Holzmann. J. 13, 112.
"	11.344, 4° } Extremes	Schweitzer. Am. Chem. 7, 174.
"	11.377, 4° } Extremes	"
"	11.385, 0°	Quincke. P. A. 97, 396.
"	11.4	Roberts and Wrightson. Bei. 5, 817.
" Not pressed	11.350, 14°	Spring. Ber. 16, 2724.
" Once "	11.501, 14°	"
" Twice "	11.492, 16°	"
"	11.359, 0°	Vicentini and Omodei. Bei. 11, 769.
"	11.005, 325°, solid	"
"	10.645, 325°, molten	"
" Molten	10.509, m. of 3	Playfair and Joule. M. C. S. 3, 74.
" "	11.07	Mallet. A. J. S. (3), 8, 212.
" "	10.87 } Two methods	Roberts and Wrightson. Ann. (5), 30, 181.
" "	10.65 } Two methods	"
" "	10.952	Quincke. P. A. 135, 642.
Thorium*	7.657	Chydenius. J. 16, 194.
"	7.795	"
" Crystallized	11.230	Nilson. Ber. 16, 160. Compare earlier paper, Ber. 15, 2544.
" Non-crystallized	10.968	"
Nitrogen. Liquefied	.41 to .44, —23°	Cailletet and Hautefeuille. C. R. 92, 1086.
" "	.37 to .38, 0°	"
" "	.4552, —146°.6	Wroblevsky. C. R. 102, 1010.
" "	.5842, —153°.7	"
" "	.83, —193°	"
" "	.866, —202°	"
" "	.859 } —194°.4, boiling point.	Olszewski. P. A. (2), 31, 78.
" "	.886 } —194°.4, boiling point.	"
" "	.891 } —194°.4, boiling point.	"
" "	.905 } —194°.4, boiling point.	"
Phosphorus. Common	1.77	Berzelius. See Böttger.
" "	2.09	Böttger. Watts' Dict.
" "	1.800	Playfair and Joule. M. C. S. 3, 69.
" "	1.826 } 10°	Schrötter. J. 1, 336.
" "	1.840 } 10°	"
" "	1.8262 } 10°	Kopp. A. C. P. 93, 129.
" "	1.8265 } 10°	"
" "	1.823, 35°	Gladstone and Dale. J. 12, 73.
" "	1.83676, 0°	Pisati and De Franchis. Ber. 8, 70
" "	1.82321, 20°	"
" "	1.80681, 44°	"
" Red	1.964, 10°	Schrötter. J. 1, 336.
" "	2.089 } 17°	Schrötter. J. 3, 262.
" "	2.106 } 17°	"
" " Cryst.	2.14	Two preparations. Brodie. J. 5, 330.
" " "	2.23	"
" " "	2.34, 15°.5	Hittorf. J. 18, 130.

* Nilson's determinations are the only ones having any present value. Chydenius' work has merely historical interest.

Name.	Specific Gravity.	Authority.
Phosphorus. Red. Cryst.	2.34, 0°	Troost and Hautefeuille. Ber. 7, 482.
" "	2.148, 0°, prep. at 265°	
" "	2.19, 0° " 360°	
" "	2.293, 0° " 500°	
" Molten	1.744	Playfair and Joule. M. C. S. 3, 76.
" "	1.88, 45°	Schrötter. J. 1, 336.
" "	1.763	Gladstone and Dale. J. 12, 73.
" "	1.74924, 40°	Boils at 278°.3. Pisati and De Franchis. Ber. 8, 70.
" "	1.6949, 100°	
" "	1.6027, 200°	
" "	1.52867, 280°	
" "	1.4850, at boiling point	Ramsay and Masson. Ber 18, 2147.
" "	1.833	Quincke. P. A. 135, 642.
Vanadium	5.5, 15°	Roscoe. P. T. 1869, 679.
"	5.866 } 15°	Setterberg. Of. Ak. St. 1882, 10, 13.
"	5.875	
Arsenic	5.7633	Brisson. P. des C.
"	5.766	Mohs. See Böttger.
"	5.7633	Stromeyer. " "
"	5.884	Turner.
"	5.700	Guibourt. B. J. 7, 128.
"	5.959	
"	5.672	Herapath. P. M. 64, 321.
"	5.6281	Karsten. Schw. J. 65, 394.
" Native	5.786	Breithaupt. J. P. C. 16, 475.
" "	5.722	Breithaupt. J. P. C. 11, 151.
" "	5.734	
" [illegible]	5.230	Playfair and Joule. M. C. S. 3, 72.
"	5.395, 12°.5	Ludwig. J. 12, 188.
"	5.726 } 14°	Bettendorff. J. 20, 253.
"	5.728	
" After fusion	5.709, 19°	Mallet. B. S. C. 18, 438.
" Allotropic	4.710 } 14°	Bettendorff. J. 20, 253.
" "	4.716	
" "	4.6 to 4.7	Engel. C. R. 96, 498.
" Compressed	4.91	Spring. Ber. 16, 326.
" Allotropic	3.7002 to 3.7100, 15°	Rückoldt. A. C. P. 240, 215.
Antimony	6.702	Brisson. P. des C.
"	6.712	Hatchett. See Böttger.
"	6.783	Böckmann. " "
"	6.852	Muschenbroek. " "
"	6.860	Bergmann. " "
"	6.646	Mohs. " "
"	6.6101	Breithaupt. " "
"	6.7006	Karsten. Schw. J. 65, 394.
"	6.715	Marchand and Scheerer. J. P. C. [27, 193.
"	6.705, 3°.75, m. of 3	Dexter. P. A. 100, 567.
"	6.6987 } Extremes	
"	6.7102	
"	6.718, 14°	Matthiessen. J. 13, 112.
"	6.697	Schröder. P. A. 107, 113.
"	6.7022, m. of 6	Cooke. Proc. Amer. Acad. 1877
"	6.6957 } Extremes	
[illegible]	6.7070	
[illegible]	6.620, 0°	Quincke. P. A. 135, 642.
[illegible]essed	6.675, 15°.5	Spring. Ber. 16, 2724.
[illegible]	6.753, 15°	
[illegible]	6.740, 16°	

Name.	Specific Gravity.	Authority.
Antimony. Amorphous	5.74	Gore. J. 13, 172.
" "	5.83	
" Molten	6.646	Playfair and Joule. M. C. S. 3, 77.
" "	6.529	
" "	6.528	Quincke. P. A. 135, 642.
Bismuth	9.67	Muschenbroek. See Böttger.
"	9.822	Brisson. P. des C.
"	9.800	Leonhard. See Böttger.
"	9.8827	Thénard. " "
"	9.8827	Berzelius.
"	9.831	Herapath. P. M. 64, 321.
"	9.6542	Karsten. Schw. J. 65, 394.
" Pure	9.799, 19°	Marchand and Scheerer. J. P. C. 27, 193.
" Commercial	9.783	
" Compressed	9.556	
" Crystallized	9.935	C. St. Claire Deville. J. 8, 15.
" Quickly cooled from fusion.	9.677	
"	9.823, 12°	Holzmann. J. 13, 112.
"	9.713, m. of 3	Schröder. P. A. 107, 113.
"	9.82	Roberts and Wrightson. Bei. 5, 817.
"	9.819, 0°	Quincke. P. A. 135, 642.
" Not pressed	9.804, 13°.5	Spring. Ber. 16, 2724.
" Once "	9.856, 15°	
" Twice "	9.863, 15°	
"	9.787, 0°.	Vicentini and Omodei. Bei. 11, 769.
"	9.673, 270°.9 s.	
"	10.004, 270°.9 l.	
" Molten	9.798	Playfair and Joule. M. C. S. 3, 75.
" "	10.039	Roberts and Wrightson. By two methods. Nature, 22, 448.
" "	10.055	
" "	9.709	Quincke. P. A. 135, 642.
Columbium. (Niobium)	6.0 to 7.37 *	Marignac. J. 21, 214.
"	7.06, 15°.5	Roscoe. C. N. 37, 26.
Tantalum	10.08 to 10.78	Rose. J. 9, 366.
Oxygen. Liquified	.9787	By two methods. Pictet. Ann. (5), 13, 193.
" "	.9883, m. of 4	
" "	.8402	Pictet, recalculated by Offret. Ann. (5), 19, 271.
" "	.8655	
" "	.58, .65, .70, 0°	Cailletet and Hautefeuille. C. R. 92, 1086.
" "	.84, .88, .89,—23°	
" "	.895	Wroblevsky. C. R. 97, 166.
" "	.899 —130°, m. of 12	Wroblevsky. P. A. (2), 20, 867.
" "	.7555 —129°.57	Olszewski. Ber. 17, ref. 198.
" "	.806 —134°.43	
" "	.877 —139°.3	
" "	1.110 to 1.137 —181°.4, boiling point.	Olszewski. P. A. (2), 31, 73.
" "	.6, —118°	Wroblevsky. C. R. 102, 1010.
"	1.24 —200°	
Sulphur. Roll	1.9907	Brisson. P. des C.

* Probably the hydride, Cb H.

NAME.	SPECIFIC GRAVITY.	AUTHORITY.
Sulphur. Roll	1.868	Böckmann. } Quoted by Marchand and Scheerer. J. P. C. 24, 129.
" Flowers	2.086	Gehler.
" Cryst.	1.898	Fontenelle.
" From solution	1.927	Bischof.
" Cryst.	1.989	Breithaupt.
" Roll	1.9777 }	Thomson.
" "	2.0000 }	
" Prismatic	2.072	Mohs.
" Native	2.086	Dumas and Roget.
" Soft	2.027	Osann.
" Native	2.05001 }	Karsten. Schw. J. 65, 394.
" From fusion	1.9889 }	
" Prismatic	1.982 }	Marchand and Scheerer. J. P. C. 24, 129.
" Native	2.066	
" From solution	2.0518	
" Soft	1.957 }	
" Native	2.069	Kopp. A. C. P. 93, 129.
" Soft	1.919 }	C. St. Claire Deville. J. 1, 365.
" "	1.928	
" Prismatic	1.958	
" Native	2.070	
" From solution	2.063 }	
" Crystallized	2.010 }	Playfair and Joule. M. C. S. 3, 79.
" Flowers	1.913	
" Waxy	1.921 }	
" Native, cryst.	2.0757 }	Brame. C. R. 35, 748.
" Soft	1.87 to 1.9319 }	
" Amorphous. Yellow.	1.87 }	Müller. J. 19, 118.
" Amorphous. Brown.	1.91 —1.93 }	
" Crystallized	2.0748, 0°	Pisati. Ber. 7, 361.
" Insoluble	1.9556, 0° }	Spring. Bei. 5, 853.
" "	1.9496, 20°	
" "	1.9041, 40°	
" "	1.9438, 60°	
" "	1.9559, 80°	
" "	1.9648, 100° }	
" Cryst. from CS_2	2.0477, 0° }	Spring. Bei. 5, 854. From Bulletin de l'Acad. Roy. de Belg. (3), 2, 83-110, 1881.
" " "	2.0370, 20°	
" " "	2.0283, 40°	
" " "	2.0182, 60°	
" " "	2.0014, 80°	
" " "	1.9756, 100° }	
" From Sicily	2.0788, 0° }	
" "	2.0688, 20°	
" "	2.0583, 40°	
" "	2.0479, 60°	
" "	2.0373, 80°	
" "	2.0220, 100° }	
" Lamellæ	2.041 —2.049	Maquenne. Ber. 17, ref. 199.
" Sicilian	2.06665, 16°.75	Schrauf. Z. K. M. 12, 325.
" Molten	1.801 } Extremes of 5 determinat'ns	Playfair and Joule. M. C. S. 3, 76.
" "	1.815 }	
" "	1.4794. m. of 5 }	At the boiling point, 446°. Ramsay. J. C. S. 35, 471.
" "	1.4578 } Extremes	
" "	1.5130 }	
Selenium	4.3 to 4.32	Berzelius. See Böttger.

Name.	Specific Gravity.	Authority.
Selenium	4.810	Boullay. See Böttger.
"	4.808, 15°	Hittorf. J. 4, 319.
" Cryst. fr. fusion	4.805	
" " "	4.796	Schaffgotsch. J. 6, 329.
" Amorphous	4.276 } 20°	
" "	4.286	
" Precip. Red	4.245	
" " "	4.275	
" Precip. after heat'g to 50°.	4.250	Schaffgotsch. J. 6, 329.
	4.297	
" Crystallized	4.460	
" "	4.509	
" "	4.700	Mitscherlich. J. 8, 314.
" " from solution.	4.760 } 15°	
" " "	4.788	
" Crystallized	4.406, 21°	Neumann. P. A. 126, 138.
" Black	4.80	
" "	4.81	Rathke. J. P. C. 108, 235.
" Precip. Red	4.26	
" " "	4.28	
" Gray	4.495	
" " Granular	4.514	
" Laminated, from alkaline selenides.	4.77	
	4.79	
	4.86	
" Cryst. from CS_2	4.418	
" " " "	4.54	Rammelsberg. P. A. 152, 154
" " " "	4.59	
" Amorphous	4.27	
"	4.34	
" Melted	4.29	
" "	4.36	
" Compressed	4.7994, 0°	
" "	4.7869, 20°	
" "	4.7699, 40°	
" "	4.7526, 60°	
" "	4.7351, 80°	
" "	4.7167, 100°	
" Uncompressed	4.7312, 0°	Spring. Bei. 5, 854. From Bu[illegible] de l'Acad. Roy. de Belg. ([illegible] 2, 88–110, 1881.
" "	4.7176, 20°	
" "	4.7010, 40°	
" "	4.6826, 60°	
" "	4.6623, 80°	
" "	4.6396, 100°	
" Fused	4.2	Quincke. P. A. 135, 642.
Tellurium	6.115	Klaproth. Ann. 25, 273.
"	6.1879	Magnus. See Böttger.
"	6.2445 m. of 5	Berzelius. P. A. 28, 392.
"	6.180	Löwe. J. P. C. 60, 163.
"	6.343	Reichenstein. See Böttger.
" Compressed	6.2549, 0°	
" "	6.2410, 20°	
" "	6.2294, 40°	
" "	6.2170, 60°	Spring. Bei. 5, 854. [illegible] de l'Acad. [illegible]
" "	6.2051, 80°	2, 88–110, [illegible]
" "	6.1955, 100°	

NAME.	SPECIFIC GRAVITY.	AUTHORITY.
Tellurium. Uncompressed.	6.2322, 0°	Spring. Bei. 5, 854. From Bull. de l'Acad. Roy. de Belg. (3), 2, 88-110, 1881.
" "	6.2194, 20°	
" "	6.2052, 40°	
" "	6.1500, 60°	
" "	6.1366, 80°	
" "	6.1640, 100°	
"	6.204	Klein and Morel. Ann. (6), 5, 61.
"	6.215	
hromium	7.3	Bunsen. Watts' Dict.
" Crystallized	6.81, 25°	Wöhler. J. 12, 169.
" Red. by K Cy	6.20	Loughlin. J. 21, 220.
olybdenum	8.490	Bucholz. Nich. J. 20, 121.
"	8.615	
"	8.636	
"	8.60	Debray. J. 11, 157.
" Red. by K Cy	8.56	Loughlin. J. 21, 220.
ungsten	17.60	D'Elhuyart. See Böttger.
"	17.22	Allan and Aiken. " "
"	17.4	Bucholz. Schw. J. 3, 1.
"	16.54	Uslar. J. 8, 372.
"	17.50	
"	18.26	
" Reduced by H	17.1 to 17.3	Bernoulli. J. 13, 152.
" " C	17.9 to 18.12	
"	16.6	Prepared by three methods. Zettnow. J. 20, 218.
"	17.2	
"	18.447, 17°	
"	19.261, 12°	Roscoe. C. N. 25, 61.
"	18.25	Waddell. A. C. J. 8, 287.
"	18.77	
ranium	18.40	Peligot. J. 9, 380.
"	18.33	Peligot. A. C. P. 149, 128.
"	18.685, 4°, m. of 3	Zimmermann. Ber. 15, 851.
hlorine. Liquefied	1.33, 15°.5	Faraday. P. T. 1823, 164.
romine	2.966	Balard. Ann. (2), 32, 337.
"	2.98 15°	Löwig. See Böttger.
"	2.99	
"	3.18718, 0°	Pierre. Ann. (3), 20, 5.
"	3.18828, 0°	Thorpe. J. C. S. 37, 172.
"	2.98218, 59°.27	
"	2.9483, m. of 4	Taken at the boiling point. Ramsay. Ber. 13, 2146.
"	2.9471 Extremes	
"	2.9503	
"	3.1875, 0°	Van der Plaats. J. C. S. 50, 849.
odine	4.948	Gay Lussac. Ann. 91, 5.
" Solid	4.9173, 40°.3	Billet. J. 8, 46.
" "	4.886, 60°	
" "	4.857, 79°.6	
" "	4.841, 89°.8	
" "	4.825, 107°	
" Molten	4.004, 107°	
"	3.988, 111°.7	
	3.944, 124°.3	
	3.918, 133°.5	
	3.866, 151°	
	3.796, 170°	
	5.080	Playfair. Proc. Roy. Soc. Edin. [4, 241.

Name.	Specific Gravity.	Authority.
Manganese	6.861 }	Bergmann.
"	7.10 }	
"	8.03	Bachmann. See Böttger.
"	8.013	John. P. M. 2, 176.
"	7.138 }	Brunner. J. 10, 202.
"	7.206 }	
Iron	7.788	Brisson. P. des C.
" Wrought	7.790	Karsten. Schw. J. 65, 394.
" Wire in several different conditions.	7.6805 }	Baudrimont. J. P. C. 7, 268.
	7.6000 }	
	7.7169 }	
	7.7812 }	
" Hammered	7.7438 }	
" Bar	7.4839	Bröling. See Percy's Metallurgy.
"	7.8707 }	Berzelius. " " "
"	7.865 }	
" Reduced by zinc vapor.	7.50 }	Poumarède. J. 2, 281.
	7.84 }	
" Reduced by C.	7.180	Playfair and Joule. M. C. S. 3,72.
" Electrolytic	8.1393, 15°.5	Smith. See Percy's Metallurgy.
" Fused in H., not forged.	7.880, 16° }	Caron. C. R. 70, 1263.
" Fused in H., forged	7.868, 16° }	
" Fused in H., wire	7.847, 16° }	
" Fused in crucible	7.833, 16° }	
" Good commercial	7.852, 16° }	
" Reduced by H.	7.998 } 10°	Schiff.
" "	8.007 }	
" "	6.03	Stahlschmidt. J. 18, 255.
" Molten	6.88	Roberts and Wrightson. Bei. 5, 817. [6, 145.
" Molten steel	8.05	Petruschewsky and Alexejeff. Bei.
Nickel	7.807	Brisson. P. des C.
"	8.279, cast }	Richter. Ann. 58, 164.
"	8.666, forged }	
" Cast	8.380 } 12°.5	Tupputi. Ann. 78, 133.
" Forged	8.820 }	
"	8.932, 12°.5	Tourte. Ann. 71, 103.
"	8.477 }	Baumgartner. See Böttger.
"	8.713 }	
"	8.637	Brunner. " "
"	9.000	Bergmann. " "
" Reduced by H.	7.861 }	Playfair and Joule. M. C. S. 3, 71.
" "	7.803 }	
" Wire	8.88, 4°	Arndtsen.
" Reduced by H.	8.975 }	Rammelsberg. J. 2, 282.
" "	9.261 }	
"	8.900	Schröder. P. A. 107, 113.
Cobalt	8.710	Lampadius. Erd. J. (1), 5, 390.
"	8.485	Brunner. See Böttger.
"	9.152	Gehler. " "
"	8.500	Mitscherlich. " "
"	8.5131	Berzelius. " "
"	8.5384	Haüy and Tassaert. See Böttger.
"	8.558	T. H. Henry. M. C. S. 3, 59.
" Reduced by H.	7.718 }	Playfair and Joule. M. C. S. 3, 71.
" "	8.260 }	
" "	8.957, m. of 5	Rammelsberg. J. 2, 282.

Name.	Specific Gravity.	Authority.
Copper	8.895	Hatchett. P. T. 1803, 88.
" Rolled	8.878	Brisson. P. des C.
" Cast	8.788	
" "	8.83	
" Drawn	8.9463	Berzelius. See Böttger.
" Hammered	8.9587	
"	8.78	Kupffer. Ann. (2), 25, 356.
"	8.900	Herapath. P. M. 64, 321.
"	8.721	Karsten. Schw. J. 65. 394.
" Wire in several different conditions.	8.6225 8.8912 8.7059 8.8787	Baudrimont. J. P. C. 7, 287.
" Hammered	8.8893	
" Cast, slowly cooled	8.4525	
" Crystallized	8.940	
" Cast	8.921	
" Various sorts of wire.	8.939 8.949 8.930 8.951	Marchand and Scheerer. J. P. C. [27, 193.
" Sheet	8.952	
" Pressed	8.981	
" Electrolytic	8.914	
"	8.667	Mallet. D. J. 85, 378.
" Finely divided	8.428	
" "	8.483	
" "	8.360	
" Electrolytic	8.884	Playfair and Joule. M. C. S. 3, 57.
" "	8.941	
" "	8.984	
" Finely divided	8.367 } 4°	Playfair and Joule. J. C. S. 1, 121.
" "	8.41618	
" Hammered	8.855	
" "	8.878	
" Rolled	8.879	O'Neill. Memoirs Manchester Philosophical Society, (3), 1, 243.
" "	8.898	
" Annealed	8.884	
" "	8.896	
"	8.902, 12°	Schiff.
" Native	8.838	Whitney. J. 12, 769.
"	8.952	Schröder. P. A. 107, 118.
"	8.958	
" Electrolytic, cast	8.916	
" " "	8.958	
" " wire	8.853	Dick. P. M. (4), 11, 409.
" " "	8.783	
" Plate	8.902, 0°	Quincke. P. A. 97, 396.
"	8.945, 0° (in vacuo)	Hampe. C. C. 6, 379.
"	8.9565, 17°	
"	8.8	Roberts and Wrightson. Bei. 5, [817.
" Allotropic	8.0 to 8.2	Schutzenberger. J. Ph. Ch. (4), 28, 366.
[illegible]	7.272	Playfair and Joule. M. C. S. 3, 77.
[illegible]	8.217	Roberts and Wrightson. Bei. 5, 817.
	0.472	Brisson. P. des C.
	9,862, 10°	Biddle. P. M. 30, 152.

Name.	Specific Gravity.	Authority.
Silver	10.43 }	Lengsdorf.
"	10.47 }	
"	10.4282	Karsten. Schw. J. 65, 3
" Cast, slowly cooled	10.1053 }	Baudrimont. J. P. C. 7,
" Same mass, rolled	10.5513	
" Hammered	10.4476	
" Brittle	9.8463	
" Granulated	9.6323	
" Cryst. in laminæ	9.5538	
" Wire	10.4913 }	
"	10.434	Breithaupt. J. P. C. 11,
"	10.482	Karmarsch. J. P. C. 43,
"	10.522 }	Playfair and Joule. M. C.
"	10.537 }	
" Cast	10.505 }	G. Rose. P. A. 73, 1.
" Pressed	10.5665	
" Precip. powdery	10.5532	
" " "	10.6191	
"	10.5287, m. of 13	
"	10.5237, m. of 4	
"	10.5283, m. of 8 }	
"	10.468, 13°	Holzmann. J. 13, 112.
"	10.575	Christomanos. J. 21, 27
" After heating in vacuo.	10.512	Dumas. C. N. 37, 82.
"	10.412, 4°	Zimmermann. Ber. 15,
"	10.57	Roberts. C. N. 31, 143.
"	10.621, 0°	Quincke. P. A. 135, 642
" Molten	9.131 }	Playfair and Joule. M. C.
" "	9.281 }	
" "	9.4612	Roberts. C. N. 31, 143.
" "	9.51 } Two methods.	Roberts and Wrightson. (5). 30, 181.
" "	9.40 }	
" "	10.002	Quincke. P. A. 135, 642
Gold	19.258	Brisson. P. des C.
" Hammered	19.207	Elliot. Quoted by Rose.
"	19.3 to 19.4	Lewis. " " "
" Pressed	19.3336, 17°.5	G. Rose. P. A. 73, 1.
" Ppt. by oxalic acid	19.2981, 17°.5	
" Cast and pressed, 16 samples differently prepared.	19.2881, 17°.5.m. of 37	
	19.2689, 17°.5 } Extremes.	
	19.3296, 17°.5 }	
" Ppt. by oxalic acid	19.4941	G. Rose. P. A. 75, 403.
"	19.265, 13°	Holzmann. J. 13, 112.
" Before rolling	19.2945 }	Roberts and Rigg. J. C 12, 203.
" Once rolled	19.2982 }	
" Molten	17.069	Quincke. P. A. 135, 64
Ruthenium	11.0 }	Deville and Debray. J.
"	11.4 }	
"	12.261, 0°	Deville and Debray. C. R.
Rhodium	11.0+	Wollaston. P. T. 1804,
"	11.2	Cloud. Schw. J. 43, 31
"	11.0	Hare. A. J. S. (2), 2,
"	12.1	Deville and Debray.
Palladium	11.3 }	Wollaston. See [illegible]
"	11.8 }	
"	12.148	Lowry.
"	11.832	Lampadi

Name.	Specific Gravity.	Authority.
Palladium	11.8	Vauquelin. Ann. 88, 167.
"	11.041, 18°	Cloud. Schw. J. 1, 362.
"	10.923	Breithaupt. See Böttger.
"	11.628	Benneke and Reinecker. See Böttger.
"	11.30	Cock. M. C. S. 1, 161.
" Hammered	11.80	
"	11.752	Breithaupt. J. P. C. 11, 151.
"	11.4, 22°.5	Deville and Debray. J. 12, 237.
"	12.0	Troost and Hautefeuille. C. R. 78, 970.
"	12.104	Lisenko. Ber. 5, 29.
" Molten	10.8	Quincke. P. A. 135, 642.
Osmium	21.40	Deville and Debray. J. 12, 232.
"	22.477	Deville and Debray. C. R. 82, 1076.
Iridium. Porous globule	18.680	Children. See Böttger.
"	21.78	Eckfeldt and Boyé, for Hare. A. J. S. (2), 365.
"	21.83	
" Black	18.6088	G. Rose. P. A. 75, 403.
"	21.15	Deville and Debray. J. 12, 242.
"	22.421, 17°.5	Deville and Debray. P. M. (4), 50, 561.
"	22.38	Matthey. C. N. 40, 240.
Platinum	20.85	Borda. Quoted by Marchand. J. P. C. 33, 385.
"	20.98	
"	21.06	
" Cast	19.5	Brisson. P. des C.
" Hammered	20.8	
" Wire	21.0	
" "	21.7	Klaproth. Quoted by Marchand.
"	21.061	Sickingen. " " "
"	21.45	Berzelius. " " "
"	21.47	Berthier. " " "
"	21.53	
" Cast	17.7	Prechtl. " " "
"	21.3	Faraday. " " "
" Hammered	20.9	E. D. Clarke. " " "
" Spongy	21.47	Thomson. " " "
"	21.348	Scholz. See Böttger.
"	21.359	Meissner. " "
" Wire	21.16	Wollaston. P. A. 16, 158.
" "	21.40	
" "	21.53	
" Hammered	21.25	
" Spongy	17.572	Liebig. P. A. 17, 101.
" "	15.780	
" "	16.319	
" Black	17.894	Scholz. See Böttger.
"	21.2668, 0°	Marchand. J. P. C. 33, 385.
"	21.3092	
" Hammered	21.31	Hare. A. J. S. (2), 2, 365.
" "	21.16	
" "	21.23	
[illegible]	16.634	Rose. P. A. 75, 403.
[illegible] Black	20.9815	
[illegible]	20.7732	
[illegible]	22.8926	

NAME.	SPECIFIC GRAVITY.	AUTHORITY.
Platinum. Precip. black	22.0845 }	Rose. P. A. 75, 408.
" Black	26.1418, 15°.7 ? }	
" "	17.766 }	
" Spongy	21.169 }	Playfair and Joule. M. C. S. 3, 57.
" "	21.243 }	
"	21.15	Deville and Caron. J. 10, 259.
"	21.15	Deville and Debray. J. 12, 240.
" Very pure	21.504, 17°.6	Deville and Debray. P. M. (4), 50, 560.
" Molten	18.915	Quincke. P. A. 135, 642.

II. INORGANIC FLUORIDES.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Hydrogen fluoride or hydrofluoric acid, liquid.	H F	1.0609	Davy. P. T. 1813, 263.
" "	"	.9922, 11° }	Gore. P. T. 1869, 173.
" "	"	.9879, 12°.7 }	
" "	"	.9885, 13°.6 }	
" "	"	1.036, 15°.5 }	
Lithium fluoride	Li F	2.582 }	Schröder. Dm. 1873.
" "	"	2.608 }	
" "	"	2.612 }	
" "	"	2.295, 21°.5	Clarke. A. J. S. (3), 13, 292.
Sodium fluoride	Na F	2.713, m. of 7 }	Schröder. Dm. 1873.
" "	"	2.601 } Extremes }	
" "	"	2.772 }	
" "	"	2.558, 14°.5	Clarke. A. J. S. (3), 13, 292.
Potassium fluoride	K F	2.454, 12°	Bödeker. B. D. Z.
" "	"	2.459 }	Schröder. Dm. 1873.
" "	"	2.476 }	
" "	"	2.507 }	
" "	"	2.096, 21°.5	Clarke. A. J. S. (3), 13, 292.
" "	"	2.350, m. of 3	Schröder. Ber. 11, 2018.
Rubidium fluoride	Rb F	3.202, 16°.5	Clarke. A. J. S. (3), 13, 293.
Ammonium hydrogen fluoride.	Am H F_2	1.211, 12°	Bödeker. B. D. Z.
Silver fluoride	Ag F	5.852, 15°.5	Gore. C. N. 21, 28.
Magnesium fluoride	Mg F_2	2.472	Schröder. Dm. 1873.
" "	"	2.856, 12°	Cossa. Ber. 10, 295.
" " Sellaite.	"	2.972	Strüver. Dana's Min., 2d App.
Zinc fluoride	Zn F_2	4.612, 12° }	Clarke. A. J. S. (3), 13, 291.
" "	"	4,556, 17° }	
" "	Zn F_2. 4 H_2O	2.567, 10° }	
" "	" "	2.585, 12° }	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Cadmium fluoride	Cd F_2	5.994, 22°, m. of 7.	Kebler. A. C. J. 5, 241.
Calcium fluoride	Ca F_2	3.183, m. of 60	Kenngott. J. 6, 858.
" "	"	3.150	Smith. J. 8, 976.
" "	"	3.138	Schiff. A. C. P. 108, 21.
" "	"	3.162	Luca. J. 13, 98.
" " Precip.	"	3.086	Schröder. Dm. 1873.
" " Ignited	"	3.150	
Strontium fluoride	Sr F_2	4.202	" "
" "	"	4.236	
" "	"	4.210	Schröder. P. A. 6 Erganz. Bd. 622.
Barium fluoride	Ba F_2	4.58, 18°	Bödeker. B. D. Z.
" "	"	4.824	Schröder. Dm. 1873.
" "	"	4.833	
Lead fluoride	Pb F_2	8.241	" "
Nickel fluoride	Ni F_2	2.855, 14°	Clarke. A. J. S. (3), 13, 291.
" "	Ni F_2. 3 H_2O	2.014, 19°	
Aluminum fluoride	Al F_3	3.065, 12°	Bödeker. B. D. Z.
" "	"	3.13, 12°	
Arsenic trifluoride, l	As F_3	2.73	Unverdorben. P. A. 7, 316.
" "	"	2.66	MacIvor. C. N. 30, 169.
" "	"	2.6659, 0°	Thorpe. J. C. S. 37, 372.
" "	"	2.4497, 60°.4	
" "	"	2.734	Moissan. C. R. 99, 874.
Bismuth fluoride	Bi F_3	5.32, 20°	Gott and Muir. J. C. S. 53, 137.
" oxyfluoride	Bi O F	7.5, 20°	
Cryolite. Greenland	Na_3 Al F_6	2.9—3.077	Dana's Mineralogy.
" Siberia	"	2.95	Durnew. J. 4, 820.
" Colorado	"	2.972, 24°	Hillebrand and Cross. A. J. S. (3), 26, 271.
Chiolite	Na_5 Al_3 F_{14}	2.72	Hermann. J. P. C. 37, 188.
"	"	2.90	Kokscharow. J. 4, 820.
"	"	2.842—2.898	Rammelsberg. P. A. 74, 314.
Chodneffite	Na_2 Al F_5	3.003	Rammelsberg. P. A. 74, 314.
"	"	3.077	
"	"	2.62—2.77	Wörth. Dana's Mineralogy.
Pachnolite.* Colorado	Na Ca Al F_6. H_2 O	2.965, 17°, m. of 4.	Hillebrand and Cross. A. J. S. (3), 26, 271.
" "	"	2.962, 22°	
Prosopite. Altenberg	Ca Al_2 (F. O H)$_8$	2.890	Scheerer. Dana's Mineralogy.
" "	"	2.898	
" Colorado	"	2.880, 23°	Hillebrand and Cross. A. J. S. (3), 26, 271.
[illegible]	$NaMgAl_4F_{15}$. $8H_2O$	2.4	Brush. A. J. S. (3), 2, 30.

…nolite and thomsenolite are distinct species, but Hillebrand and Cross

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Ralstonite	$NaMgAl_4F_{15}.3H_2O$.	2.62	Nordenskiöld. Dana's Min., 3d App.
"	$(MgNa_2)Al_3(F.OH)_{11}$ $2H_2O$.	2.560	Penfield and Harper. A. J. S. (3), 32, 381.
Fluocerite	$Ce F_3$, ?	4.7	Berzelius. Dana's Mineralogy.
Tysonite	$4 Ce F_3 . 3 La F_3$	6.13, in mean	Allen and Comstock. A. J. S. (3), 19, 391.
Yttrocerite	?	3.447	Berzelius. Dana's Mineralogy.
Potassium borofluoride	$K B F_4$	2.5 }	Stolba. B. S. C. 18, 309.
" "	"	2.6 }	
Lithium silicofluoride	$Li_2 Si F_6 . 2 H_2 O$	2.33	Stolba. J. 17, 213.
" "	"	2.244	Topsoë. C. C. 4, 76.
Sodium silicofluoride	$Na_2 Si F_6$	2.7547, 17°.5	Stolba. J. P. C. 97, 503.
" "	"	2.680, m. of 4	Schröder. Dm. 1873.
" "	"	2.671 } Extremes	
" "	"	2.691 }	
Potassium silicofluoride	$K_2 Si F_6$	2.6655 } 17°.5	Stolba. J. P. C. 97, 503.
" "	"	2.6649 }	
" "	"	2.655 }	Schröder. Dm. 1873.
" "	"	2.698 }	
" "	"	2.704 }	
Rubidium silicofluoride	$Rb_2 Si F_6$	3.3383, 20°	Stolba. J. 20, 186.
Cæsium silicofluoride	$Cs_2 Si F_6$	3.3756, 17°	Preis. J. 21, 195.
Ammonium silicofluoride	$Am_2 Si F_6$	1.970	Topsoë. C. C. 4, 76.
" "	"	2.056, m. of 5	Schröder. Dm. 1873.
" "	"	2.035 } Extremes	
" "	"	2.071 }	
Calcium silicofluoride	$Ca Si F_6$. ?	2.649 } 17°.5	Stolba. J. 33, 239.
" "	"	2.675 }	
" "	$Ca Si F_6 . 2 H_2 O$	2.254	Topsoë. C. C. 4, 76.
Strontium silicofluoride	$Sr Si F_6 . 2 H_2 O$	2.988 }	Stolba. J. 34, 285.
" "	" "	2.999 }	
Barium silicofluoride	$Ba Si F_6$	4.2794, 21°	Stolba. J. 18, 170.
" "	"	4.2380, 22°	Schweitzer. Univ. of Missouri, special pub. 1876.
Magnesium silicofluoride	$Mg Si F_6 . 6 H_2 O$	1.761 }	Topsoë. C. C. 4, 76.
Zinc silicofluoride	$Zn Si F_6 . 6 H_2 O$	2.104 }	
" "	" "	2.121 } 17°.5	Stolba. J. R. C. 6, 72.
" "	" "	2.1448 }	
Manganese silicofluoride	$Mn Si F_6 . 6 H_2 O$	1.858	Topsoë. C. C. 4, 76.
Iron silicofluoride*	$Fe Si F_6 . 6 H_2 O$	1.96115, 17°.5	Stolba. B. S. C. 26, 155.
Nickel silicofluoride	$Ni Si F_6 . 6 H_2 O$	2.109 }	Topsoë. C. C. 4, 76.
Cobalt silicofluoride *	$Co Si F_6 . 6 H_2 O$	2.067 }	
" "	" "	2.1211 } 19°	Stolba. B. S. C. 26, 155.
" "	" "	2.1135 }	
Copper silicofluoride*	$Cu Si F_6 . 4 H_2 O$	2.535	Topsoë. C. C. 4, 76.
" "	$Cu Si F_6 . 6 H_2 O$	2.1576, 19°	Stolba. J. 20, 299.
" "	" "	2.207	Topsoë. C. C. 4, 76.
" "	" "	2.182	Topsoë and Christiansen.

*According to Stolba, these salts contain 6½ molecules of water.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Potassium titanofluoride	$K_2 Ti F_6$	2.0797, 12°	Bödeker. B. D. Z.
" "	$K_2 Ti F_6 . H_2 O$	2.902	Topsoë. C. C. 4, 76.
Copper titanofluoride	$Cu Ti F_6 . 4 H_2 O$	2.529	" "
Potassium zircofluoride	$K_2 Zr F_6$	3.582	" "
Zinc zircofluoride	$Zn Zr F_6 . 6 H_2 O$	2.255	" "
Nickel zircofluoride	$Ni Zr F_6 . 6 H_2 O$	2.227	" "
Potassium stannifluoride	$K_2 Sn F_6 . H_2 O$	3.053	" "
Ammonium stannifluoride	$Am_2 Sn F_6$	2.887	" "
Manganese stannifluoride	$Mn Sn F_6 . 6 H_2 O$	2.807	" "
Cobalt stannifluoride	$Co Sn F_6 . 6 H_2 O$	2.604	" "
Potassium columboxyfluoride.	$K_2 Cb O F_5 . H_2 O$	2.813	" "
Copper columboxyfluoride	$Cu Cb O F_5 . 4 H_2 O$	2.750	" "
Potassium tantalofluoride.	$K_2 Ta F_7$	4.056	" "
Potassium uranoxyfluoride	$3 K F . U O_2 F_2$	4.263, 20°	Baker. J. C. S. 35, 760.
" "	$5 K F . 2 U O_2 F_2$	4.379, 20°	" "
" "	$3 K F . 2 U O_2 F_2 . 2 H_2 O$	4.108, 20°	" "
Ammonium uranoxyfluoride.	$3 Am F . U O_2 F_2$	3.186, 20°	" "

III. INORGANIC CHLORIDES.

1st. Simple Chlorides.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Hydrogen chloride or hydrochloric acid, liquef'd	$H Cl$	.908, 0°	Ansdell. C. N. 41, 76. Critical temperature, 51°.25.
" "	"	.873, 7°.5	
" "	"	.854, 11°.7	
" "	"	.835, 15°.8	
" "	"	.808, 22°.7	
" "	"	.748, 33°	
" "	"	.678, 41°.6	
" "	"	.619, 47°.8	
Lithium chloride	$Li Cl$	1.998	Kremers. J. 10, 67.
" "	"	2.074	Schröder. P. A. 107, 113.
" " Fused	"	1.515	Quincke. P. A. 138, 141.
Sodium chloride	$Na Cl$	2.2001	Hassenfratz. Ann. 28, 3.
" "	"	2.15	Leslie. See Böttger.
" "	"	2.26	Mohs.
" "	"	2.078	Karsten. Schw. J. 65, 394.
" "	"	2.030	Unger. See Böttger.
" "	"	2.150	Kopp. A. C. P. 36, 1.
" "	"	2.011, m. of 3	Playfair and Joule. M. C. S. 2, 401.
	"	2.24	Filhol. Ann. (3), 21, 415.

Name.	Formula.	Sp. Gravity.	Authority.
Sodium chloride	Na Cl	2.155, 15°.5	Holker. P. M. (3), 27, 213.
" " Cryst.	"	2.195	Deville. J. 8, 15.
" " After fusion.	"	2.204	
" "	"	2.142	Grassi. J. 1, 39.
" "	"	2.207	
" " Halite	"	2.135	Hunt. J. 8, 976.
" "	"	2.148	Schiff. A. C. P. 108, 21.
" "	"	2.153	Schröder. P. A. 106, 226.
" "	"	2.161	
" "	"	2.145	Buignet. J. 15, 14.
" "	"	2.1629, 15°	Stolba. J. P. C. 97, 503.
" "	"	2.1548	Haagen. P. A. 131, 117.
" "	"	2.06—2.08	Page and Keightley. J. C. S. (2), 10, 566.
" "	"	2.145	Stas.
" " Natural	"	2.137	Rüdorff. Ber. 12, 251.
" "	"	2.1641, 15°	Bedson and Williams. Ber. 14, 2552.
" " Cryst. at 20°.	"	2.16171	Nicol. P. M. (5), 15, 94.
" " Cryst. at 108°.	"	2.15494	
" "	"	1.612, at the melting point.	Braun. J. C. S. (2), 13, 31.
" "	"	2.23	Brügelmann. Ber. 17, 2359.
" "	"	2.1653, 10°	Andreae. J. P. C. (2), 30, 315.
" "	"	2.1615, 20°	
" "	"	2.1594, 30°	
" "	"	2.15665, 40°	
" "	"	2.15435, 50°	
" "	"	2.1881	Zehnder. P. A. (2), 29, 259.
" "	"	2.1887	
" "	"	2.092, 0°	Quincke. P. A. 135, 642.
" " Fused	"	2.04	
Potassium chloride	K Cl	1.9367	Hassenfratz. Ann. 28, 3.
" "	"	1.836	Kirwan. See Böttger.
" "	"	1.9153	Karsten. Schw. J. 65, 394.
" "	"	1.945	Kopp. A. C. P. 36, 1.
" "	"	1.900	Playfair and Joule. M. C. S. 2, 401.
" "	"	1.97756, 4°	Playfair and Joule. J. C. S. 1, 137.
" "	"	1.994	Filhol. Ann. (3), 21, 415.
" "	"	1.995	Schiff. A. C. P. 108, 21.
" "	"	1.918, 15°.5	Holker. P. M. (3), 27, 213.

Name.	Formula.	Sp. Gravity.	Authority.
Potassium chloride	K Cl	1.995	Schröder. P. A. 106, 226.
" "	"	1.986	Buignet. J. 14, 15.
" "	"	1.94526, 15°	Stolba. J. P. C. 97, 503.
" "	"	1.90—1.91	Page and Keightley. J. C. S. (2), 10, 566.
" "	"	1.612, at the melting p't.	Braun. J. C. S. (2), 13, 81.
" " Not pressed.	"	1.980, 22°	Spring. Ber. 16, 2724.
" " Once pressed.	"	2.071, 20°	Spring. Ber. 16, 2724.
" Twice pressed.	"	2.068, 21°	Spring. Ber. 16, 2724.
" "	"	1.93	Brügelmann. Ber. 17, 2359.
" "	"	1.982, 0°	Quincke. P. A. 135, 642.
" " Fused	"	1.870	Quincke. P. A. 135, 642.
Rubidium chloride	Rb Cl	2.807	Setterberg. Of. Ak. St. 1882, 6, 23.
Cæsium chloride	Cs Cl	3.992	" "
Ammonium chloride	Am Cl	1.450	Wattson. See Böttger.
" "	"	1.54425	Hassenfratz. Ann. 28, 3.
" "	"	1.528	Mohs. See Böttger.
" "	"	1.578, m. of 3	Playfair and Joule. M. C. S. 2, 401.
" "	"	1.5333, 4°	Playfair and Joule. J. C. S. 1, 137.
" "	"	1.52, 15°.5	Holker. P. M. (3), 27, 214.
" "	"	1.500	Kopp. A. C. P. 36, 1.
" "	"	1.522	Schiff. A. C. P. 108, 21.
" "	"	1.550	Buignet. J. 14, 15.
" "	"	1.5033, 15°	Stolba. J. P. C. 97, 503.
" "	"	1.5191, 15°	Stolba. J. P. C. 97, 503.
" "	"	1.5209, 15°	Stolba. J. P. C. 97, 503.
" "	"	1.456	W. C. Smith. Am. J. P. 53, 145.
Silver chloride	Ag Cl	5.4548	Proust.
" " Unfused	"	5.501	Karsten. Schw. J. 65, 394.
" " Black'd	"	5.5671	Karsten. Schw. J. 65, 394.
" " After fusion.	"	5.4582	Karsten. Schw. J. 65, 394.
" "	"	5.129	Herapath. P. M. 64, 321.
" "	"	5.548	Boullay. Ann. (2), 43, 266.
" "	"	5.55	Gmelin.
" " Native	"	5.31	Domeyko. Dana's Min.
" " "	"	5.43	Domeyko. Dana's Min.
" "	"	5.517	Schiff. A. C. P. 108, 21.
	"	5.5943	Schröder. P. A. 106, 226.

Name.	Formula.	Sp. Gravity.	Autho
Silver chloride	Ag Cl	5.505, 0° }	Rodwell. 1125.
" " Molten	"	4.919, 451° }	
" " "	"	5.5	Quincke. 642.
" " "	"	5.3	Quincke. 141.
Thallium chloride	Tl Cl	7.00	Willm.
" "	"	7.02	Lamy. J
Thallium trichloride	$Tl_2 Cl_3$	5.9	"
Magnesium chloride	$Mg Cl_2$	2.177, m. of 2	Playfair a M. C. S.
" "	$Mg Cl_2 . 6 H_2 O$	1.562, m. of 4	"
" "	"	1.558	Filhol. 21, 415.
" " Bischofite.	"	1.65	Ochsenius. 1, 128.
Zinc chloride	$Zn Cl_2$	2.753, 13°	Bödeker.
Cadmium chloride	$Cd Cl_2$	3.6254, 12°	"
" "	"	3.655, 16°.9	P. Knight
" "	$Cd Cl_2 . 2 H_2 O$	3.324, m. of 3	W. Knigh
Mercurous chloride	Hg Cl	7.1758	Hassenfrat 28, 3.
" "	"	7.14	Boullay. 43, 266.
" "	"	6.9925	Karsten. 65, 394.
" "	"	6.7107	Herapath. 321.
" " Native.	"	6.482	Haidinger Min.
" "	"	7.178	Playfair a M. C. S
" "	"	6.56	Schiff. A. 21.
Mercuric chloride	$Hg Cl_2$	5.1398	Hassenfrat 28, 3.
" "	"	5.14	Gmelin.
" "	"	5.42	Boullay. 43, 266.
" "	"	5.4032	Karsten. 65, 394.
" "	"	6.223	Playfair a M. C. S
" "	"	5.448, m. of 3	Schröder. 113.
Calcium chloride	$Ca Cl_2$	2.214 }	Boullay. 43, 266.
" "	"	2.269 }	
" "	"	2.0401	Karsten. 65, 394.
" "	"	2.480	Playfair a M. C. S
" "	"	2.240	Filhol. A 415.
" "	"	2.205	Schiff. A.
" "	"	2.160, 27°	Favre an C. R. T
" "	"	2.219, 0° }	[illegible]
" " Fused	"	2.15 }	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Calcium chloride. Fused	$CaCl_2$	2.120	Quincke. P. A. 138, 141.
" "	$CaCl_2 . 6H_2O$	1.680, m. of 2	Playfair and Joule. M. C. S. 2, 401.
" "	"	1.635	Filhol. Ann. (3), 21, 415.
" "	"	1.612, 10°	Kopp. J. 8, 44.
" "	"	1.701, 17°.1	Favre and Valson. C. R. 77, 579.
" "	"	1.654, m. of 4	Schröder. Dm. 1878.
" "	"	1.642 } Extremes	Schröder. Dm. 1878.
" "	"	1.671 } Extremes	Schröder. Dm. 1878.
Strontium chloride	$SrCl_2$	2.8033	Karsten. Schw. J. 65, 394.
" "	"	2.960	Filhol. Ann. (3), 21, 415.
" "	"	3.035, 17°.2	Favre and Valson. C. R. 77, 579.
" "	"	3.054	Schröder. A. C. P. 174, 249.
" "	"	2.770, at the melting point.	Braun. J. C. S. (2), 13, 31.
" " Fused	"	2.770	Quincke. P. A. 138, 141.
" "	$SrCl_2 . 6H_2O$	2.015, m. of 2	Playfair and Joule. M. C. S. 2, 401.
" "	"	1.603	Filhol. Ann. (3), 21, 415.
" "	"	1.921	Buignet. J. 14, 15.
" "	"	1.932, 17°.2	Favre and Valson. C. R. 77, 579.
" "	"	1.954	Schröder. Dm. 1878.
" "	"	1.964, 16°.7	Mühlberg. F. W. C.
Barium chloride	$BaCl_2$	3.860	Boullay. Ann. (2), 43, 266.
" "	"	4.156	Boullay. Ann. (2), 43, 266.
" "	"	3.8	Richter. Watts' Dict.
" "	"	3.7037	Karsten. Schw. J. 65, 394.
" "	"	3.750	Filhol. Ann. (3), 21, 415.
" "	"	3.820	Schiff. A. C. P. 108, 21.
" "	"	3.872	Schröder. P. A. 107, 113.
" "	"	3.886	Schröder. P. A. 107, 113.
" "	"	3.7, 17°.5	Kremers. P. A. 85, 42.
" "	"	3.844, 16°.8	Favre and Valson. C. R. 77, 579.
" "	"	3.92	Brügelmann. Ber. 17, 2359.
" " Molten	"	3.700	Quincke. P. A. 138, 141.
" "	$BaCl_2 . 2H_2O$	3.144, m. of 2	Playfair and Joule. M. C. S. 2, 401.
" "	"	2.664	Filhol. Ann. (3), 21, 415.
—	"	3,05435, 4°	Playfair and Joule. J. C. S. 1, 137.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Barium chloride	$Ba Cl_2 . 2 H_2 O$	3.052	Schiff. A. C. P. 108, 21.
" "	"	3.081	Buignet. J. 14, 15.
" "	"	3.054, 15°.5	Favre and Valson. C. R. 77, 579.
" "	"	3.045	Schröder. Dm. 1873.
Lead chloride	$Pb Cl_2$	5.29	Monro.
" " Native	"	5.238	Dana's Min.
" " Unfused	"	5.8022	Karsten. Schw. J. 65, 394.
" " After fusion	"	5.6824	
" " Cryst.	"	5.802	Schabus. J. 3, 322.
" "	"	5.78	Schiff. J. 11, 11.
" "	"	5.80534, 15°	Stolba. J. P. C. 97, 503.
" "	"	5.88	Brügelmann. Ber. 17, 2359.
Chromous chloride	$Cr Cl_2$	2.751, 14°	Grabfield. F. W. C.
Chromic chloride	$Cr_2 Cl_6$	3.03, 17°	Schafarik. J. P. C. 90, 12.
" "	"	2.757, 15°, m. of 13.	Grabfield. F. W. C.
Manganous chloride	$Mn Cl_2$	2.478	Schröder. A. C. P. 174, 249.
" "	$Mn Cl_2 . 4 H_2 O$	1.898	Schröder. Dm. 1873.
" "	"	1.913	
" "	"	1.928	
" "	"	2.01, 10°	Bödeker. B. D. Z.
Ferrous chloride	$Fe Cl_2$	2.528	Filhol. Ann. (3), 21, 415.
" "	"	2.988, 17°.9	Grabfield. F. W. C.
" "	$Fe Cl_2 . 4 H_2 O$	1.926	Filhol. Ann. (3), 21. 415.
" "	"	1.937	Schabus. J. 3, 327.
Ferric chloride	$Fe_2 Cl_6$	2.804, 10°.8	Grabfield. F. W. C.
Nickel chloride	$Ni Cl_2$	2.56	Schiff. A. C. P. 108, 21.
Cobalt chloride	$Co Cl_2$	2.937, m. of 3	Playfair and Joule. M. C. S. 2, 401.
" "	$Co Cl_2 . 6 H_2 O$	1.84, 13°	Bödeker and Ehlers. B. D. Z.
Cuprous chloride	$Cu Cl$	3.6777	Karsten. Schw. J. 65, 394.
" "	"	3.376	Playfair and Joule. M. C. S. 2, 401.
" " Nantoquite	"	3.930	Breithaupt. J. 25, 1145.
Cupric chloride	$Cu Cl_2$	3.054	Playfair and Joule. M. C. S. 2, 401.
" "	$Cu Cl_2 . 2 H_2 O$	2.535, m. of 2	" "
" "	"	2.47, 18°	Bödeker. B. D. Z.
Boron trichloride, l	$B Cl_3$	1.35	Wöhler and Deville. J. 10, 931.
Gallium chloride. Molten	$Ga Cl_3$	2.36, 80°	Boisbaudran. C. N. 44, 166.
Cerium chloride	$Ce Cl_3$	3.88, 15°.5	Robinson. C. N. 50, 251.
Didymium chloride	$Di Cl_3 . 6 H_2 O$	2.286 } 15°.8	Cleve. U. N. A. 1885.
" "	"	2.287 } 15°.8	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
marium chloride	$Sm\,Cl_3.\,6\,H_2\,O$	2.375 } 15°	Cleve. U.N.A. 1885.
" "	"	2.392 } 15°	
rbon chloride.*			
icon tetrachloride	$Si\,Cl_4$	1.52371, 0°	Pierre. Ann. (3), 20, 26.
" "	"	1.5083, 5°–10°	Regnault. P. A. 62, 50.
" "	"	1.4983, 10°–15°	
" "	"	1.4884, 15°–20°	
" "	"	1.4878, 20°	Haagen. P. A. 131, 117.
" "	"	1.49276	Mendelejeff. C. R. 51, 97.
" "	"	1.522, 0°	Friedel and Crafts. A. J. S. (2), 43, 162.
" "	"	1.52408, 0°	Thorpe. J. C. S. 37, 372.
" "	"	1.40294, 57°.57	
con hexchloride	$Si_2\,Cl_6$	1.58, 0°	Troost and Hautefeuille. Z. C. 14, 331.
anium tetrachloride	$Ti\,Cl_4$	1.76088, 0°	Pierre. Ann. (3), 20, 21.
" "	"	1.7487, 5°–10°	Regnault. P. A. 62, 50.
" "	"	1.7403, 10°–15°	
" "	"	1.7322, 15°–20°	
" "	"	1.76041, 0°	Thorpe. J. C. S. 37, 371.
" "	"	1.52223, 136°.41	
manium tetrachloride	$Ge\,Cl_4$	1.887, 18°	Winkler. Ber. 19, ref. 655.
dichloride	$Sn\,Cl_2.\;2\,H_2\,O$	2.759	Playfair and Joule. M. C. S. 2, 401.
"	" "	2.71, 15°.5, s.	Penny. J. C. S. 4, 239.
"	" "	2.5876, 37°.7, l	
"	" "	2.634, 24°	Bishop. F. W. C.
tetrachloride	$Sn\,Cl_4$	2.26712, 0°	Pierre. Ann. (3), 20, 19.
"	"	2.2618, 5°–10°	Regnault. P. A. 62, 50.
"	"	2.2492, 10°–15°	
"	"	2.2368, 15°–20°	
"	"	2.234, 15°	Gerlach. J. 18, 237.
"	"	2.2328, 20°	Haagen. P. A. 131, 117.
"	"	2.27875, 0°	Thorpe. J. C. S. 37, 372.
"	"	1.97813, 113°.89	
itrogen trichloride	$N\,Cl_3$. ?	1.653	Watts' Dictionary.
hosphorus trichloride	$P\,Cl_3$	1.45	Davy. Watts' Dict.
" "	"	1.61616, 0°	Pierre. Ann. (3), 20, 9.
" "	"	1.6091, 5°–10°	Regnault. P. A. 62, 50.
" "	"	1.6001, 10°–15°	
" "	"	1.5911, 15°–20°	
" "	"	1.6119, 0°, m. of 2.	Buff. A. C. P. 4 Supp. Bd. 129. Boiling point, 76°.
"	"	1.59708, 10°	
"	"	1.47124, 76°	

ides of carbon are assigned to a special division among organic

Name.	Formula.	Sp. Gravity.	Autho
Phosphorus trichloride	$P\,Cl_3$	1.5774, 20°	Haagen. I 117.
" "	"	1.61275, 0°	Thorpe. 37, 372
" "	"	1.46845, 75°.95	
Vanadium dichloride	$V\,Cl_2$	3.23, 18°, s	Roscoe. P 679.
Vanadium trichloride	$V\,Cl_3$	3.00, 18°, s	"
Vanadium tetrachloride	$V\,Cl_4$	1.8584, 0°	"
" "	"	1.8363, 8°	
" "	"	1.8159, 32°	
Arsenic trichloride	$As\,Cl_3$	2.20495, 0°	Pierre. An
" "	"	2.1766	Penny and J. 5, 382.
" "	"	2.1668, 20°	Haagen. P 117.
" "	"	2.20500, 0°	Thorpe. 37, 372.
" "	"	1.91813, 130°.21	
Antimony trichloride	$Sb\,Cl_3$	3.064, 26°, s	Cooke. Pr Acad. 18
" "	"	2.6766 liquid at 73°.2	Kopp. A. 348.
" "	"	2.6758	
" "	"	2.6750	
Antimony pentachloride	$Sb\,Cl_5$	2.3461, 20°	Haagen. P 117.
Bismuth trichloride	$Bi\,Cl_3$	4.56, 11°	Bödeker. E
Sulphur chloride	$S_2\,Cl_2$	1.687	Dumas. A 49, 204.
" "	"	1.686	Marchand. 22, 507.
" "	"	1.6970, 5°–10°	Regnault. 62, 50.
" "	"	1.6882, 10°–15°	
" "	"	1.6793, 15°–20°	
" "	"	1.7055, 0°	Kopp. A. 355.
" "	"	1.6802, 16°.7	
" "	"	1.6828, 20°	Haagen. P 117.
" "	"	1.4848, 138°	Ramsay. J. 463.
" "	"	1.70941, 0°	Thorpe. 37, 356.
" "	"	1.49201, 138°.12	
Selenium chloride	$Se_2\,Cl_2$	2.906, 17°.5	Divers and Ber. 17, 8
Iodine monochloride	$I\,Cl$	3.263, 0°	Hannay. J. 11, 818. 24°.7. 100°
" "	"	3.222, 16°.5	
" "	"	3.206, 18°.2	
" "	"	3.180, 30°	
" "	"	3.178, 32°	
" "	"	3.132, 45°	
" "	"	3.127, 48°	
" "	"	3.064, 60°	
" "	"	3.052, 73°	
" "	"	3.038, 75°	
" "	"	[illegible], 86°	
" "	"	2.964, 90°	
" "	"	2.944, 95°	
" "	"	[illegible], 98°	
" "	"	3.1822, [illegible]	
" "	"	[illegible]	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
·ichloride	$I Cl_3$	3.1107	Christomanos. Ber. 10, 789.
a dichloride	$Pt Cl_2$	5.8696, 11°	Bödeker. B. D. Z.
a tetrachloride	$Pt Cl_4 . 8 H_2 O$	2.431, 15°	" "

2d. Double Chlorides.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
um magnesium .e.	$Am_2 Mg Cl_4 . 6 H_2 O$	1.456, 10°	Bödeker. B. D. Z.
n zinc chloride	$K_2 Zn Cl_4$	2.297	Schiff. A. C. P. 112, 88.
um zinc chloride	$Am_2 Zn Cl_4$	1.879	" "
" "	"	1.72 } 10°	Bödeker and Ehlers.
" "	"	1.77 } 10°	B. D. Z.
" "	"	1.77	Romanis. C. N. 49, 273.
:inc chloride	$Ba_2 Zn Cl_6 . 4 H_2 O$	2.845	Warner. C. N. 27, 271.
n cadmium chlo-	$K_2 Cd Cl_4$	2.500	Schröder. Dm. 1878.
n cadmium chlo-	$Sr Cd_2 Cl_6 . 7 H_2 O$	2.708, 24°, m. of 3.	W. Knight. F.W.C.
·admium chloride	$Ba Cd Cl_4 . 4 H_2 O$	2.968	Topsöe. C. C. 4, 76.
" "	"	2.952, 24°.5 }	W. Knight. F.W.C.
" "	"	2.966, 25°.2 }	W. Knight. F.W.C.
mercury chloride	$Na Hg Cl_3 . 2 H_2 O$	3.011	Playfair and Joule. M. C. S. 2, 401.
m mercury chlo-	$K Hg Cl_3 . H_2 O$	3.735, m. of 3.	" "
ium mercury le.	$Am_2 Hg_2 Cl_6 . H_2 O$	3.822	" "
"	$Am_2 Hg Cl_4 . H_2 O$	2.938	" "
m iron chloride	$K_2 Fe Cl_4 . 2 H_2 O$	2.162	Schabus. J. 3, 327.
m copper chloride	$K_2 Cu Cl_4 . 2 H_2 O$	2.426	Playfair and Joule. M. C. S. 2, 401.
" "	"	2.400	Schiff. A. C. P. 112, 88.
" "	"	2.369	Kopp. J. 11, 10.
" "	"	2.410	Tschermak. S. W. A. 45, 603.
" "	"	2.358 }	Schröder. Dm. 1878.
" "	"	2.392 }	Schröder. Dm. 1878.
" "	"	2.425 }	Schröder. Dm. 1878.
a copper chloride	$Rb_2 Cu Cl_4 . 2 H_2 O$	2.895	Wyrouboff. B. S. M. 10, 127.
copper chlo-	$Am_2 Cu Cl_4 . 2 H_2 O$	2.018	Playfair and Joule. M. C. S. 2, 401.
"	"	1.963	Schiff. A. C. P. 112, 88.
	"	1.977	Kopp. J. 11, 10.
	"	2.066	Tschermak. S. W. A. 45, 603.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Ammonium copper chloride.	$Am_2 Cu Cl_4 . 2 H_2O$	[illegible] 20°	Evans. F. W. [illegible]
Potassium palladiochloride.	$K_2 Pd Cl_4$	2.[illegible]	Topsoë. C. C. 4, [illegible]
Ammonium palladiochloride.	$Am_2 Pd Cl_4$	2.[illegible]	" "
Magnesium palladiochloride.	$Mg Pd Cl_4 . 6 H_2O$	2.124	" "
Zinc palladiochloride	$Zn Pd Cl_4 . 6 H_2O$	2.[illegible]	" "
Nickel palladiochloride	$Ni Pd Cl_4 . 6 H_2O$	2.[illegible]	" "
Potassium iridiochloride	$K_2 Ir Cl_4$	[illegible], 15°	Bödeker. B. D. [illegible]
Ammonium iridiochloride	$Am_2 Ir Cl_4$	2.[illegible], 15°	" "
Potassium platinochloride	$K_2 Pt Cl_4$	3.[illegible], 20°.3	Clarke. A. J.
" "	"	3.[illegible], [illegible]	S. 16. 206.
Ammonium platinochloride.	$Am_2 Pt Cl_4$	2.[illegible]	Rosmanis. C. N. 273.
Sodium platinichloride	$Na_2 Pt Cl_6 . 6 H_2O$	2.500	Topsoë. C. C. 7[illegible].
Potassium platinichloride	$K_2 Pt Cl_6$	3.[illegible], 15°	Bödeker. B. D. [illegible]
" "	"	3.[illegible]	Tschermak. S. [illegible] A. 45. 603.
" "	"	3.[illegible], 17°.[illegible]	Pettersson. U. [illegible]
" "	"	3.[illegible], 17°.2	A. 1874.
" "	"	3.144	Schröder. Dm. 18[illegible]
Rubidium platinichloride	$Rb_2 Pt Cl_6$	3.[illegible], 17°.4	Pettersson. U. [illegible]
" "	"	3.[illegible], 17°.[illegible]	A. 1874.
Ammonium platinichloride.	$Am_2 Pt Cl_6$	2.[illegible], 15°	Bödeker. B. D.
" "	"	3.[illegible], 15°	
" "	"	3.[illegible]	Tschermak. S. [illegible] A. 45. 603.
" "	"	3.[illegible], 17°.2	Pettersson. U. [illegible] A. 1874.
" "	"	2.[illegible]	Schröder. Dm. 187[illegible]
" "	"	3.[illegible]	Topsoë. C. C. 4, 7[illegible]
Thallium platinichloride	$Tl_2 Pt Cl_6$	[illegible], 17°	Pettersson. U. [illegible] A. 1874.
Magnesium platinichloride.	$Mg Pt Cl_6 . 6 H_2O$	2.4[illegible]	Topsoë. C. C. 4, 7[illegible]
" "	$Mg Pt Cl_6 . 12 H_2O$	2.[illegible]	" "
Cadmium platinichloride	$Cd Pt Cl_6 . 6 H_2O$	2.[illegible]	" "
Barium platinichloride	$Ba Pt Cl_6 . 4 H_2O$	2.[illegible]	" "
Lead platinichloride	$Pb Pt Cl_6 . 3 H_2O$	[illegible]	" "
Manganese platinichloride	$Mn Pt Cl_6 . 6 H_2O$	2.[illegible]	" "
" "	$Mn Pt Cl_6 . 12 H_2O$	2.[illegible]	" "
Iron platinichloride	$Fe Pt Cl_6 . 6 H_2O$	2.[illegible]	" "
Copper platinichloride	$Cu Pt Cl_6 . 6 H_2O$	2.[illegible]	" "
Didymium platinichloride	[illegible]	2.[illegible], 2.[illegible] [illegible]	Cleve. U. N. A. 188[illegible]
Samarium platinichloride	[illegible]	2.[illegible], 2.[illegible] [illegible]	" "
Didymium aurochloride	[illegible]	2.[illegible], 2.[illegible] [illegible]	" "
Samarium aurochloride	[illegible]	2.[illegible], 2.[illegible] [illegible]	" [illegible]
Potassium stannochloride	[illegible]	2.[illegible]	Playfair [illegible]
Ammonium stannochloride.	[illegible]	2.[illegible]	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
stannichloride.	$K_2 Sn Cl_6$	2.686 }	Schröder. Dm. 1878.
"	"	2.688 }	
"	"	2.700	Joergensen.
"	"	2.948	Romanis. C. N. 49, 278.
tannichloride	$Cs_2 Sn Cl_6$	3.3308, 20°.5	Stolba. D. J. 198, 225.
m stannichlo-	$Am_2 Sn Cl_6$	2.387, m. of 4	Schröder. Dm. 1878.
"	"	2.381 } Extremes.	
"	"	2.396 }	
"	"	2.511	Romanis. C. N. 49, 273.
m stannichlo-	$Mg Sn Cl_6 . 6 H_2 O$	2.080	Topsoë and Christiansen.
antimony chlo-	$K_3 Sb Cl_6 . 2 H_2 O$	2.42	Romanis. C. N. 49, 273.

3d. Oxy- and Sulpho-Chlorides.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
ite	$Pb_2 O Cl_2$	7.21	Greg. J. 4, 821.
te	$Pb_3 O_2 Cl_2$	7.0—7.1	Dana's Mineralogy.
te	$Cu_2 Cl (O H)_3$	3.898	Zepharovich. J. 24, 1186.
	"	3.757	Tschermak. J. 26, 1201.
	"	3.7688	Zepharovich. J. 26, 1201.
kite	$Cu_4 Cl_2 (O H)_6 . 3 H_2 O$	3.6	Church. J. C. S. 18, 213.
ite	$Cu_5 Cl_2 (O H)_8$	3.5	Church. J. C. S. 18, 78.
ic oxychloride	$Hg_3 O_2 Cl_2$	8.63	Blaas. Z. K. M. 5, 283.
ium oxychloride	Di O Cl	5.725 } 21°.2	Cleve. U. N. A. 1885.
"	"	5.735 }	
"	"	5.793, 21°.5	
rium oxychloride	Sm O Cl	6.987 } 21°	" "
"	"	7.047 }	
yl chloride	$N O_2 Cl$	1.3677, 8°	Baudrimont. J. P. C. 31, 478.
" "	"	1.82, 14°	Müller. A. C P. 122, 1.
phorus oxychloride	$P O Cl_3$	1.673, 14°	Cahours. J. P. C. 45, 129.
"	"	1.70, 12°	Wurtz. J. 1, 365.
"	"	1.662, 19°.5	Mendelejeff. J. 13, 7.
"	"	1.69371, 10°	Buff. A. C. P. 4 Supp. Bd., 129.
"	"	1.69106, 14°	
"	"	1.68626, 15°	
"	"	1.64945, 51°	
"	"	1.509116, 110°	

Name.	Formula.	Sp. Gravity.	Autho
Phosphorus oxychloride	$P O Cl_3$	1.66	Wichelha 149.
" "	"	1.71163, 0°	Thorpe. 37, 387
" "	"	1.50967, 107°.23	
" "	"	1.5142, 106°.7	Schall. Be
Pyrophosphoric chloride	$P_2 O_3 Cl_4$	1.58, 7°	Geuther chaelis. 16, 231.
Vanadyl dichloride	$V O Cl_2$	2.88, 13°, s	Roscoe. P.
Vanadyl trichloride	$V O Cl_3$	1.764, 20	Schafarik. 76, 142.
" "	"	1.841, 14°.5	Roscoe. P.
" "	"	1.836, 17°.5	
" "	"	1.828, 24°	
" "	"	1.86534, 0°	Thorpe. 37, 348
" "	"	1.63073, 127°.19	
" "	"	1.854, 18°	L'Hôte. 1151.
Antimony oxychloride	$Sb_4 O_5 Cl_2$	5.014, s.	Cooke. P Acad. 1
Bismuth oxychloride	$Bi O Cl$	7.2, 20°, s.	Muir, H and Rob S. 39, 3
Daubreelite	$Bi_8 O_9 Cl_3$	6.4—6.5	Domeyko.
Sulphur oxychloride	$S_2 O Cl_4$	1.656, 0°	Ogier. B
Thionyl chloride	$S O Cl_2$	1.675, 0°	Wurtz. 99, 255.
" "	"	1.67673, 0°	Thorpe. 37, 354
" "	"	1.52143, 78°.8	
" "	"	1.6554, 10°.4	Nasini.
Sulphuryl chloride	$S O_2 Cl_2$	1.661, 21°	Behrends.
" "	"	1.70814, 0°	Thorpe. 37, 359
" "	"	1.56025, 69°.95	
Disulphuryl chloride	$S_2 O_5 Cl_2$	1.818, 16°	H. Rose. 291.
" "	"	1.762	Rosenstiel
" "	"	1.819, 18°	Michaelis.
" "	"	1.85846, 0°	Thorpe. 37, 36
" "	"	[illegible]	
Chlorosulphonic acid	$S O_2 \cdot O H \cdot Cl$	1.78474, 0°	Thorpe. 37, 35
" "	"	[illegible]	
" "	"	[illegible], 14°	Nasini.
Selenyl chloride	$Se O Cl_2$	2.44	Weber.
"	"	2.443, [illegible]	Michaelis. 4[illegible].
Chromyl dichloride	$Cr O_2 Cl_2$	[illegible]	Thomsen. 18[illegible]
"		[illegible]	Walden.
"	"	[illegible]	Thorpe.
"	"	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

IV. INORGANIC BROMIDES.

1st. Simple Bromides.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Lithium bromide	Li Br	3.102, 17°	Clarke. A. J. S. (3), 13, 293.
Sodium bromide	Na Br	2.952	Schiff. A. C. P. 108, 21.
" "	"	3.079, 17°.5	Kremers. J. 10, 67.
" "	"	3.011	Tschermak. S. W. A. 45, 603.
" "	"	3.198, 17°.3	Favre and Valson. C. R. 77, 579.
" " Fused	"	2.448	Quincke. P. A. 138, 141.
" "	Na Br. 4 H_2O	2.84	Playfair and Joule. M. C. S. 2, 401.
" "	"	2.165, 16°.8	Favre and Valson. C. R. 77, 579.
Potassium bromide	K Br	2.415	Karsten. Schw. J. 65, 394.
" "	"	2.672	Playfair and Joule. M. C. S. 2, 401.
" "	"	2.690, m. of 6	Schröder. P. A. 106, 226.
" "	"	2.712, 12°.7	Beamer. F. W. C.
" " Fused	"	2.199	Quincke. P. A. 138, 141.
" " Not pressed	"	2.505, 18°	Spring. Ber. 16, 2724.
" " Once "	"	2.704, 18°	Spring. Ber. 16, 2724.
" " Twice "	"	2.700, 18°	Spring. Ber. 16, 2724.
Rubidium bromide	Rb Br	3.358	Setterberg. Of. Ak. St. 1882, 6, 23.
Cæsium bromide	Cs Br	4.468	" "
Ammonium bromide	Am Br	2.379	Schröder. P. A. 106, 226.
" "	"	2.266, 10°	Bödeker. B. D. Z.
" " Cryst.	"	2.327	Eder. Ber. 14, 511.
" " Sublimed	"	2.3394	Eder. Ber. 14, 511.
" "	"	2.456	Stas. Mem. Acad. Belg. 43, 1.
Silver bromide	Ag Br	6.3534	Karsten. Schw. J. 65, 394.
" "	"	6.425, m. of 7	Schröder. P. A. 106, 226.
" "	"	6.215, 17°	Clarke. A. J. S. (3), 13, 294.
" "	"	6.245, 0°	Rodwell. P. T. 1882, 1125.
" " Molten	"	5.595, 427°	Rodwell. P. T. 1882, 1125.
" " "	"	6.2	Quincke. P. A. 138, 141.
[illegible] bromide. Precip.	Tl Br	7.540, 21°.7	Keck. F. W. C.
" After fusion.	"	7.557, 17°.8	Keck. F. W. C.
[illegible]	[illegible] Br_2	3.643, 10°	Bödeker. B. D. Z.
[illegible]	[illegible] Br_2	4.712, 14°	Bödeker and Giesecke. B. D. Z.
[illegible]	[illegible]	4.910, 14°	Bödeker and Giesecke. B. D. Z.

Name.	Formula.	Sp. Gravity.	Author
Cadmium bromide	$Cd\,Br_2$	4.794, 19°.9	Knight. 1
Mercurous bromide	$Hg\,Br$	7.307	Karsten. 65, 894.
Mercuric bromide	$Hg\,Br_2$	5.9202	"
" "	"	5.7298, 16°	Beamer. 1
" "	"	5.7461, 18°	
Calcium bromide	$Ca\,Br_2$	3.32, 11°	Bödeker.
Strontium bromide	$Sr\,Br_2$	3.962, 12°	"
" "	"	3.985, 20°.5	Favre and C. R. 77,
" "	$Sr\,Br_2 . 6\,H_2O$	2.358, 18°	"
Barium bromide	$Ba\,Br_2$	4.23	Schiff. A. 21.
" "	$Ba\,Br_2 . 2\,H_2O$	3.690	"
" " Cryst.	"	3.710	Schröder. 1
" " Pulv.	"	3.588	
" "	"	3.679, 24°.3	Harper. 1
Lead bromide	$Pb\,Br_2$	6.6302	Karsten. 65, 394.
" "	"	6.611, 17°.5	Kremers.
" " Ppt.	"	6.572, 19°.2	Keck. F.
Cuprous bromide	$Cu\,Br$	4.72, 12°	Bödeker.
Boron tribromide	$B\,Br_3$	2.69, 1	Wöhler an J. 10, 94
Aluminum bromide	$Al\,Br_3$	2.54	Deville an J. 12, 26
Didymium bromide	$Di\,Br_3 . 6\,H_2O$	2.803, 20°.7	Cleve. U. N
" "	"	2.817, 20°.7	
Samarium bromide	$Sm\,Br_3 . 6\,H_2O$	2.969, 21°.8	"
" "	"	2.973, 21°.8	
Silicon tetrabromide	$Si\,Br_4$	2.8128, 0°	Pierre. 20, 28.
Titanium tetrabromide	$Ti\,Br_4$	2.6	Duppa. J
Tin dibromide	$Sn\,Br_2$	5.117, 17°	Raymann A. C. P.
Tin tetrabromide	$Sn\,Br_4$	3.322, 39°, 1	Bödeker.
" "	"	3.349, 35°	Raymann A. C. P.
Phosphorus tribromide	$P\,Br_3$	2.92489, 0°	Pierre. 20, 11.
" "	"	2.92311, 0°	Thorpe.
" "	"	2.49541, 172°.9	37, 335
Arsenic tribromide	$As\,Br_3$	3.66, 15°	Bödeker.
Antimony tribromide	$Sb\,Br_3$	3.641, 90°.1	Kopp. A 352
" "	"	3.473, 96°.1	Mac Ivor. 29, 179.
" "	"	4.148, 23°.8	Cooke. P Acad. 18
Bismuth tribromide	$Bi\,Br_3$	5.604	Bödeker.
" "	"	5.4, 20°	Muir, [illegible] and [illegible] S. [illegible]
Sulphur bromide	$S_2\,Br_2$	2.628, 4°	[illegible]
Selenium bromide	$Se_2\,Br_2$	3.604, 15°	[illegible]

2d. Double, Oxy-, and Sulpho-Bromides.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
um zinc bromide	$Am_2 Zn Br_4$	2.625, 13°	Bödeker. B. D. Z.
admium bromide	$Ba Cd Br_4 . 4 H_2 O$	3.687	Topsoë. C. C. 4, 76.
" "	"	3.665, 24°	Harper. F. W. C.
n mercury bro-	$H Hg Br_3 . 4 H_2 O$	3.17, fused	Thomsen. J. P. C. (2), 11, 283.
m mercury bro-	$K Hg Br_3$	4.410, m. of 3	Beamer. F. W. C.
" "	$K Hg Br_3 . H_2 O$	3.865, 22°	" "
n stannibromide	$K_2 Sn Br_6$	3.783	Topsoë. C. C. 4, 76.
um stannibro-	$Am_2 Sn Br_6$	3.505	" "
platinbromide	$Na_2 Pt Br_6 . 6 H_2 O$	3.323	" "
n platinbromide	$K_2 Pt Br_6$	4.68, 14°	Bödeker. B. D. Z.
"	"	4.541	Topsoë. C. C. 4, 76.
um platinbromide	$Am_2 Pt Br_6$	4.200	" "
um platinbromide	$Mg Pt Br_6 . 12 H_2 O$	2.802	" "
inbromide	$Zn Pt Br_6 . 12 H_2 O$	2.877	" "
m platinbromide	$Sr Pt Br_6 . 9 H_2 O$	2.923	" "
platinbromide	$Ba Pt Br_6 . 10 H_2 O$	3.713	" "
tinbromide	$Pb Pt Br_6$	6.025	" "
ese platinbromide	$Mn Pt Br_6 . 12 H_2 O$	2.759	" "
latinbromide	$Ni Pt Br_6 . 6 H_2 O$	3.715	" "
latinbromide	$Co Pt Br_6 . 12 H_2 O$	2.762 }	Two samples. Topsoë. C. C. 4, 76
"	"	2.634 }	
m auribromide	$Di Au Br_6 . 10 H_2 O$	3.297 } 21°.2	Cleve. U.N.A.1885.
"	"	3.311 }	
m auribromide	$Sm Au Br_6 . 10 H_2 O$	3.383 } 21°.2	" "
"	"	3.398 }	
tribromide	$N O Br_3$	2.628, 22°.6	Landolt. J. 13, 104.
ryl tribromide	$P O Br_3$	2.822	Ritter. J. 8, 301.
l tribromide	$V O Br_3$	2.9673, 0° }	Roscoe. A. C. P. 8 Supp. Bd. 95.
"	"	2.9325, 14°.5 }	
oxybromide	$Bi O Br$	6.70, 20°	Muir, Hoffmeister, and Robbs. J. C. S. 39, 37.
orus sulphobro-	$P S Br_3$	2.85, 17°	Michaelis. A. C. P. 164, 9.
"	"	2.87	Mac Ivor. C. N. 29, 116.
"	$P S Br_3 . H_2 O$	2.7937, 18°	Michaelis. A. C. P. 164, 9.
"	$P_2 S_3 Br_4$	2.2621, 17°	" "
sulphobromide	$As S_2 Br_3$	2.789	Hannay. J. C. S. 33, 291.

V. INORGANIC IODIDES.

1st. Simple Iodides.

NAME.	FORMULA.	SP. GRAVITY.	A
Lithium iodide	Li I	3.485, 23°	Clark 13,
Sodium iodide	Na I	3.450	Filho 21,
" "	"	3.654, 18°.2	Favr C.
" "	Na I. 4 H_2O	2.448, 20°.8	"
Potassium iodide	K I	3.078	Boull 43,
" "	"	3.104	
" "	"	2.9084	Karst 65,
" "	"	3.059	Playf M.
" "	"	3.056	Filho 21,
" "	"	2.850	Schiff 21.
" "	"	2.970	Buigı
" "	"	3.081	Schrö 226
" "	"	3.077	
" "	"	2.497 at the melting p't.	Brauı 13,
" " Fused	"	2.497	Quinc 141
" " Not press'd	"	3.012, 20°	Spring 272
" " Once "	"	3.110, 22°	
" " Twice "	"	3.112, 20°	
Potassium triiodide	K I_3	3.498	Johns 256
Rubidium iodide	Rb I	3.567	Setter St.
Caesium iodide	Cs I	4.537	"
Ammonium iodide	Am I	2.498, 11°	Bödel
" "	"	2.445	Schrö
Ammonium triiodide	Am I_3	3.749	Johns 246.
Iodammonium iodide	N H_3 I_2	2.46, 15°	Seam 189.
Silver iodide	Ag I	5.614	Boull 43.
" "	"	[illegible]	Karst 65,
" "	"	[illegible]	Filhol 415
" "	"	[illegible]	Schiff 21.
" "	"	[illegible]	[illegible]
" "	"	[illegible]	[illegible]
" " [illegible]	"	[illegible]	

Name.	Formula.	Sp. Gravity.	Authority.
Silver iodide. Cryst.	Ag I	5.470 } 0°	H. St. Claire Deville. P. A. 132, 307. C. R. 64, 325.
" " "	"	5.544 } 0°	
" " After fusion	"	5.687	
" " Precipitated	"	5.807, 0°	
" " Ppt compressed.	"	5.569	Fizeau.
" " After rep. fusion.	"	5.675, 0°	Rodwell. P. T. 1882, 1125.
" " After one fusion.	"	5.660, 0°	
" " From Ag in H I.	"	5.812, 0°	
" " Ppt. after fusion.	"	5.681, 0°	
" " At max. density.	"	5.771, 168°	
" " At min. density.	"	5.673,	
" " Molten	"	5.522, 527°	
" " Iodyrite	"	5.64—5.67	Breithaupt. Dana's Min.
" " "	"	5.504	Domeyko. Dana's Min.
" " "	"	5.707	Damour. J. 7, 870.
" " "	"	5.366	J. L. Smith. J. 7, 870.
" " "	"	5.677, 14°	Damour. Quoted, C. R. 64, 314.
Thallium iodide. Precip.	Tl I	7.072, 15°.5	Twitchell. F. W. C.
" " Cast	"	7.0975, 14°.7	
Zinc iodide	$Zn I_2$	4.696, 10°	Bödeker and Giesecke. B. D. Z.
" "	"	4.666, 14°.2	Kebler. F. W. C.
Cadmium iodide. α variety.	$Cd I_2$	5.543, m. of 8	Kebler. A. C. J. 5, 235. Six samples, prepared by different methods. Temperatures of weighing, 10°.5 to 20°.4.
" " "	"	5.622, m. of 8	
" " "	"	5.660, m. of 7	
" " "	"	5.729, m. of 6	
" " "	"	5.610, m. of 3	
" " "	"	5.675, m. of 4	
" " "	"	5.701, m. of 4.	Twitchell. A. C. J. 5, 235.
" " β variety.	"	4.576, 10°	Bödeker. B. D. Z.
" " "	"	4.612, m. of 7	Kebler. A. C. J. 5, 235. Two lots, 14° to 15°.4.
" " "	"	4.596, m. of 7	
" " "	"	4.688, m. of 5.	Twitchell. A. C. J. 5, 235.
Mercurous iodide	Hg I	7.75	Boullay. Ann. (2), 43, 266.
" "	"	7.6445	Karsten. Schw. J. 65, 394.
Mercuric iodide	$Hg I_2$	6.32	Boullay. Ann. (2), 43, 266.
" "	"	6.2009	Karsten. Schw. J. 65, 394.
" "	"	6.250	Filhol. Ann. (3), 21, 415.
" "	"	5.91	Schiff. A. C. P. 108, 21.
" "	"	6.27	Tschermak. S. W. A. 45, 603.
" " Red	"	6.231, m. of 7.	Owens. F. W. C.
" "	"	6.2941 } 0°	Rodwell and Elder. P. T. 1882, 1143.
	"	6.3004 } 0°	
	"	6.276, 126°	
	"	6.225, 126°	

VIII. INORGANIC OXIDES.

1st. Simple Oxides.

	Formula.	Sp. Gravity.	Authority.
	H_2O	1.0000, 4°.07	Standard of comparison.
	"	.999889, 0°	H_2O at 3°.78=1.0. Muncke. Mém. Acad. St. Petersburg, 1831.
	"	.988433, 50°	
	"	.958737, 100°	
	"	.999887, 0°	Stampfer. H_2O at 3°.75=1.0°. P. A. 21, 75.
	"	.992247, 40°	
	"	.999862, 0°	Despretz. Ann. (2), 70, 5.
	"	.99988, 0°	Mendelejeff. A. C. P. 119, 1.
	"	.95903, 95°.8	
	"	.93078, 130°.8	
	"	.93128, 131°	
	"	.93035, 131°.1	
	"	.90783, 156°.7	
	"	.90811, 156°.7	
	"	.90715, 157°	
	"	.95892, 100°	Buff. H_2O at 0°=1.0. A. C. P. 4th Supp. 129.
	"	.999866, 0°	Rossetti. Ann. (4), 10, 471. Sp. Gr. given for every degree from 0° to 50°.
	"	1.000000, 4°.07	
	"	.99975, 10°	
	"	.99826, 20°	
	"	.99575, 30°	
	"	.99238, 40°	
	"	.98835, 50°	
	"	.99831, 20°	Bedson and Williams. Ber. 14, 2550.
	"	.9543, 100°.1	Schiff. Ber. 14, 2763.
	"	.9585, 100°.3	Schiff. Ber. 14, 2766.
	"	.9587, 100°.3	
	"	.91812, — 1°	Brunner. H_2O at 0°=1.0. P. A. 64, 113.
	"	.91912, —10°	
	"	.92025, —20°	
	"	.9184, m. of 2	Playfair and Joule.† M. C. S. 2, 401.
	"	.9175	Dufour. P. M. (4), 5, 20.
	"	.918	Duvernoy. P. A. 117, 454.
	"	.922	
	"	.91674	Bunsen. Ann. (4), 28, 65.

pretense at completeness. Only a few important values

Name.	Formula.	Sp. Gravity.	Authority.
Mercuric iodide. Solid	$Hg I_2$	6.179, 200°	Rodwell and Elder. P. T. 1882, 1143
" " Molten	"	5.286, 200°	
Strontium iodide	$Sr I_2$	4.415, 10°	Bödeker. B. D. Z.
Barium iodide	$Ba I_2$	4.917	Filhol. Ann. (3) 21, 415.
" "	$Ba I_2 . 7 H_2 O$	2.673, 20°.3	Leonard. F. W. C.
Lead iodide	$Pb I_2$	6.11	Boullay. Ann. (2), 43, 266.
" "	"	6.0212	Karsten. Schw. J. 65, 394.
" "	"	6.384	Filhol. Ann. (3), 21, 415.
" "	"	6.07	Schiff. A. C. P. 108, 21.
" "	"	6.207	Schröder. P. A. 107, 113.
" "	"	6.12	Rodwell. P. T. 1882, 1144.
" " Molten	"	5.6247, 383°	
Iron iodide	$Fe I_2 . 4 H_2 O$	2.873, 12°	Bödeker. B. D. Z.
Cuprous iodide	$Cu I$	4.410	Schiff. A. C. P. 108, 21.
" "	"	5.6936	Rodwell. P. T. 1882, 1153.
Alüminum iodide	$Al I_3$	2.63	Deville and Troost. J. 12, 26.
Tin tetriodide	$Sn I_4$	4.696, 11°	Bödeker. B. D. Z.
Arsenic triiodide	$As I_3$	4.39, 13°	" "
" "	"	4.374	Schröder. Dm. 1873.
Arsenic pentiodide	$As I_5$	3.93, approx.	Sloan. C. N. 46, 194.
Antimony triiodide	$Sb I_3$	5.01, 10°	Bödeker. B. D. Z.
" "	"	4.676	Schröder. Dm. 1873.
" " Hexagonal	"	4.848, 24°, m. of 5.	Cooke. Proc. Am. Acad. 1877.
" " Monoclinic	"	4.768, 22°, m. of 2.	
Bismuth triiodide	$Bi I_3$	5.652, 10°	Bödeker. B. D. Z.
" "	"	5.544, 18°.4	Kebler. A. C. J. 5, 235.
" "	"	5.64 } 20°	Gott and Muir. J. C. S. 53, 137.
" "	"	5.65	

2d. Double and Oxy-Iodides.

Name.	Formula.	Sp. Gravity.	Authority.
Potassium cadmium iodide	$K_2 Cd I_4 . 2 H_2 O$	3.359, m. of 4.	Leonard. F. W. C.
Potassium mercury iodide	$K_2 Hg_2 I_6 . 3 H_2 O$	4.254, 22°	Owens. F. W. C.
" " "	"	4.289, 23°.5	
Silver mercury iodide	$2 Ag I . Hg I_2$	5.9984, 0°	Bellati and Romanese. Bei. 5, 178.
" " "	$3 Ag I . Hg I_2$	5.9302, 0°	" "
Copper mercury iodide	$2 Cu I . Hg I_2$	6.0956, 0°	"
" " "	$2 Cu I . 2 Hg I_2$	6.1507, 14°	Heighway. F

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Silver copper iodide	$2\ Cu\ I.\ Ag\ I$	5.7302	Rodwell. P. T. 1882, 1160.
" " "	$2\ Cu\ I.\ 2\ Ag.I$	5.7225	" "
" " "	$2\ Cu\ I.\ 3\ Ag\ I$	5.7160	" "
" " "	$2\ Cu\ I.\ 4\ Ag\ I$	5.7064	" "
" " "	$2\ Cu\ I.\ 12\ Ag\ I$	5.6950	" "
lver lead iodide	$Pb\ I_2.\ Ag\ I$	5.923, 0°	" "
dium platiniodide	$Na_2\ Pt\ I_6.\ 6\ H_2\ O$	3.707	Topsoë. C. C. 4, 76.
tassium platiniodide	$K_2\ Pt\ I_6$	5.154 } 12°	Bödeker. B. D. Z.
" "	"	5.198 } 12°	
" "	"	5.031	Topsoë. C. C. 4, 76.
amonium platiniodide	$Am_2\ Pt\ I_6$	4.610	" "
gnesium platiniodide	$Mg\ Pt\ I_6.\ 9\ H_2\ O$	3.458	" "
ic platiniodide	$Zn\ Pt\ I_6.\ 9\ H_2\ O$	3.689	" "
nganese platiniodide	$Mn\ Pt\ I_6.\ 9\ H_2\ O$	3.604	" "
n platiniodide	$Fe\ Pt\ I_6.\ 9\ H_2\ O$	3.455	" "
ckel platiniodide	$Ni\ Pt\ I_6.\ 6\ H_2\ O$	3.976	" "
" "	$Ni\ Pt\ I_6.\ 9\ H_2\ O$	3.549	" "
balt platiniodide	$Co\ Pt\ I_6.\ 9\ H_2\ O$	3.618	" "
" "	$Co\ Pt\ I_6.\ 12\ H_2\ O$	3.048	" "
wartzembergite	$Pb_3\ I_2\ O_2$	6.3	Liebe. J. 20, 1008.
"	"	5.7	Schwartzemberg. Dana's Min.
ad oxyiodide	$Pb_{11}\ I_4\ O_{10}$	7.81	Cross and Sugiura. J. C. S. 33, 406.

L CHLOROBROMIDES, CHLORIODIDES, AND BROMIODIDES.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
abolite	Ag (Cl Br)	5.31—5.43	Domeyko. Dana's Min.
"	"	5.806	Breithaupt. J. 2, 781.
" $(Cl_2\ Br_3)$	"	5.53	Yorke. J. C. S. 4, 150.
ad chlorobromide	Pb Cl Br	5.741	Iles. A. C. J. 3, 52.
licon chlorobromide	$Si\ Cl\ Br_3$	2.432	Reynolds. C. N. 55, 223.
n chlorobromide	$Sn\ Cl\ Br_3$	3.349, 35°	Reis and Raymann. J. C. S. 44, 424.
osphorus oxychlorobromide.	$P\ O\ Cl_2\ Br$	2.059, 0°	Menschutkin. J. P. C. 98, 485.
" "	"	2.12065, 0°	Thorpe. J. C. S. 37, 372.
" "	"	1.83844, 137°.6	
lver chlorobromiodide*	AgI. 2AgBr. 2AgCl	6.152, 0°	Rodwell. P.T. 1882, 1140.
" "	"	5.5118, 383°	
" " (Iodobromite)	"	5.713, 18°	Lasaulx. J. C. S. 36, 366.
" "	AgI. Ag Br. Ag Cl	6.1197, 0°	Rodwell. P.T. 1882, 1140.
" "	"	5.5673, 331°	

obromiodides may be regarded as alloys. For each of these the higher tempera- g point.

Name.	Formula.	Sp. Gravity.	Authority.
Silver chlorobromiodide	$2 AgI. AgBr. AgCl$	6.508, 0°	Rodwell. P.T.1882
" "	"	5.6971, 328°	1140.
" "	$3 AgI. AgBr. AgCl$	5.9717, 0°	" "
" "	"	5.6480, 354°	
" "	$4 AgI. AgBr. AgCl$	5.907, 0°	" "
" "	"	5.680, 380°	

VII. AMMONIO-CHLORIDES, AMMONIO-BROMIDES, AMMONIO-IODIDES.

Name.	Formula.	Sp. Gravity.	Authority.
Cadmammonium chloride	$N_2 H_6 Cd. Cl_2$	2.632	Topsoë. C. C. 4, 7
Cadmammonium bromide	$N_2 H_6 Cd. Br_2$	3.366	" "
Dimercurosammonium chloride.	$N H_2 Hg'_2. Cl$	6.858, m. of 2.	Playfair and Joule M. C. S. 2, 401.
Dimercurammonium chloride.	$N_2 H_4 Hg''_2. Cl_2$	5.700	" "
Tetramercurammonium chloride.	$N_2 Hg''_4 Cl_2. 2 H_2 O$	7.176, m. of 2.	" "
Cuprammonium chloride	$N_2 H_6 Cu. Cl_2$	2.194	" "
Copper ammonio-chloride	$Cu Cl_2. 4 N H_3. H_2 O$	1.672	" "
Nickel ammonio-bromide	$Ni Br_2. 6 N H_3$	1.837	Topsoë. C. C. 4, 7
Nickel ammonio-iodide	$Ni I_2. 6 N H_3$	2.101	" "
Purpureo-cobalt hexchloride.	$Co_2 (N H_3)_{10}. Cl_6$	1.802, 23°	Gibbs and Genth. A. J. S. (2), 23, 234
" " "	"	1.802 } 15°	Jörgensen. J. P. C.
" " "	"	1.808 } 15°	(2), 19, 49.
Purpureo-cobalt hexbromide.	$Co_2 (N H_3)_{10}. Br_6$	2.483, 17°.8	" "
Purpureo-cobalt chlorobromide.	$Co_2 (N H_3)_{10}. Cl_4 Br_2$	2.095, 16°.8	" "
Purpureo-cobalt bromochloride.	$Co_2 (N H_3)_{10}. Cl_2 Br_4$	2.161 } 17°	" "
" "	"	2.165 } 17°	
Luteo-cobalt hexchloride	$Co_2 (N H_3)_{12}. Cl_6$	1.7016, 20°	Gibbs and Genth. A. J. S. (2), 23, 319
Purpureo-chromium hexchloride.	$Cr_2 (N H_3)_{10}. Cl_6$	1.687, 15°.5	Jörgensen. J. P. C. (2), 20, 105.
Purpureo-chromium chlorobromide.	$Cr_2 (N H_3)_{10}. Cl_2 Br_4$	2.075, 18°.8	" "
Purpureo-rhodium hexchloride.	$Rh_2 (N H_3)_{10}. Cl_6$	2.072, 18°.4	Jörgensen. J. P. C.
" "	"	2.079, 18°	(2), 27, 442.
Purpureo-rhodium hexbromide.	$Rh_2 (N H_3)_{10}. Br_6$	2.643 } 17°.5	Jörgensen. J. P. C.
" "	"	2.650 } 17°.5	(2), 27, 464.
Purpureo-rhodium hexiodide.	$Rh_2 (N H_3)_{10}. I_6$	3.110, 14°.8	Jörgensen. J. P. C.
" "	"	3.120, 16°.2	(2), 27, 471.

VIII. INORGANIC OXIDES.

1st. Simple Oxides.

Name.	Formula.	Sp. Gravity.	Authority.
*	H_2O	1.0000, 4°.07	Standard of comparison.
	"	.999889, 0°	H_2O at 3°.78=1.0. Muncke. Mém. Acad. St. Petersburg, 1831.
	"	.988433, 50°	
	"	.958737, 100°	
	"	.999887, 0°	Stampfer. H_2O at 3°.75=1.0°. P. A. 21, 75.
	"	.992247, 40°	
	"	.999862, 0°	Despretz. Ann. (2), 70, 5.
	"	.99988, 0°	Mendelejeff. A. C. P. 119, 1.
	"	.95903, 95°.8	
	"	.93078, 130°.8	
	"	.93128, 131°	
	"	.93035, 131°.1	
	"	.90783 } 156°.7	
	"	.90811 } 156°.7	
	"	.90715, 157°	
	"	.95892, 100°	Buff. H_2O at 0°=1.0. A. C. P. 4th Supp. 129.
	"	.999866, 0°	Rossetti. Ann. (4), 10, 471. Sp. Gr. given for every degree from 0° to 50°.
	"	1.000000, 4°.07	
	"	.99975, 10°	
	"	.99826. 20°	
	"	.99575, 30°	
	"	.99238, 40°	
	"	.98835, 50°	
	"	.99831, 20°	Bedson and Williams. Ber. 14, 2550.
	"	.9543, 100°.1	Schiff. Ber. 14, 2763.
	"	.9585 } 100°.3	Schiff. Ber. 14, 2766.
	"	.9587 } 100°.3	
	"	.91812, — 1°	Brunner. H_2O at 0°=1.0. P. A. 64, 113.
	"	.91912, —10°	
	"	.92025, —20°	
	"	.9184, m. of 2	Playfair and Joule.† M. C. S. 2, 401.
	"	.9175	Dufour. P. M. (4), 5, 20.
	"	.918	Duvernoy. P. A. 117, 454.
	"	.922	
	"	.91674	Bunsen. Ann. (4), 23, 65.

… makes no pretense at completeness. Only a few important values

…der values.

Name.	Formula.	Sp. Gravity.	Author
Ice	H_2O	.91686, 0°	Petterson. erties of v ice."
Hydrogen dioxide	H_2O_2	1.452	Thénard. Dict.
Lithium oxide	Li_2O	2.102, 15°	Brauner an P. M. (5
Sodium oxide	Na_2O	2.805	Karsten. 65, 394.
Potassium oxide	K_2O	2.656	"
Silver monoxide	Ag_2O	7.143, 16°.6	Herapath. 321.
" "	"	7.250	Boullay. 43, 266.
" "	"	8.2558	Karsten. 65, 394.
" "	"	7.147	Playfair ar M. C. S.
" "	"	7.521, m. of 2	Schröder. 1888.
Silver dioxide	Ag_2O_2	5.474 (impure)	Mahla. J.
Glucinum oxide	Gl O	2.967	Ekeberg. 14, 346.
" "	"	3.02 } cryst.	Ebelmen.
" "	"	3.06 } cryst.	Ebelmen.
" "	"	3.083, powder	H. Rose. 74, 433.
" "	"	3.09 "	H. Rose. 74, 433.
" "	"	3.096, 12°, ppt.	H. Rose. 74, 433.
" "	"	3.027, 10°, ignited.	H. Rose. 74, 433.
" "	"	3.021, 9°, cryst.	H. Rose. 74, 433.
" "	"	3.016	Nilson and son. C. I
" "	"	3.18, 14°, cryst.	Grandeau. 8, 193.
Magnesium oxide	Mg O	3.674, periclase	Damour.
" "	"	3.750 "	Scacchi. 28, 486.
" "	"	3.642, 12° "	Cossa. Ber
" "	"	3.200	Karsten. 65, 394.
" "	"	3.644 }	H. Rose. 437.
" "	"	3.650 }	H. Rose. 437.
" "	"	3.636, cryst.	Ebelmen.
" "	"	3.42, amorphous.	Brügelman 13, 1741.
" "	"	3.1932, 0°, calcined at 350°	Ditte. J 9, 870.
" "	"	3.2014, 0°, calcined at 440°	Ditte. J 9, 870.
" "	"	3.2482, 0°, calcined at low redness.	Ditte. J 9, 870.
" "	"	3.5699, 0°, cal. at bright redness.	Ditte. J 9, 870.
" "	"	2.74	
" "	"	3.056	
" "	"	3.69	

Name.	Formula.	Sp. Gravity.	Authority.
Zinc oxide	Zn O	5.432	Mohs. See Böttger.
" "	"	5.600	Boullay. Ann. (2), 43, 266.
" "	"	5.7344	Karsten. Schw. J. 65, 394.
" "	"	5.6067	Brooks. P. A. 74, 439.
" "	"	5.6570	
" "	"	5.5298, cryst.	W. and T. J. Herapath. J. C. S. 1, 42.
" "	"	5.612	Filhol. Ann. (3), 21, 415.
" "	"	5.782, 15°, cryst	Brügelmann. P. A. (2), 4, 286.
" "	"	5.47, amorphous.	Brügelmann. Ber. 13, 1741.
" " Zincite	"	5.684	Blake. J. 13, 752.
" " Artif. cryst.	"	5.5—5.6	Gorgeu. B. S. C. 47, 146.
Cadmium oxide	Cd O	8.183, 16°.5	Herapath. P. M. 64, 321.
" "	"	6.9502	Karsten. Schw. J. 65, 394.
" " Cryst.	"	8.1108	Werther. J. 5, 390.
Mercurous oxide	Hg_2O	10.69, 16°.5	Herapath. P. M. 64, 321.
" "	"	8.9503	Karsten. Schw. J. 65, 394.
Mercuric oxide	Hg O	11.074, 17°.5	Herapath. P. M. 64, 321.
" "	"	11.085, 18°.3	
" "	"	11.0	Boullay. Ann. (2), 43, 266.
" "	"	11.1909	Karsten. Schw. J. 65, 394.
" "	"	11.29	Leroyer and Dumas. See Böttger.
" "	"	11.344	Playfair and Joule. M. C. S. 3, 84.
" "	"	11.136	Playfair and Joule. J. C. S. 1, 137.
Calcium oxide. Lime	Ca O	3.179	Boullay. Ann. (2), 43, 266.
" " "	"	3.16105	Karsten. Schw. J. 65, 394.
" " "	"	3.180	Filhol. Ann. (3), 21, 415.
" " "	"	3.251, cryst.	Brügelmann. P. A. (2), 4, 282.
" " "	"	3.32 "	Levallois and Meunier. C. R. 90, 1566.
Strontium oxide	Sr O	3.9321	Karsten. Schw. J. 65, 394.
" "	"	4.611	Filhol. Ann. (3), 21, 415.
	"	4.750, cryst.	Brügelmann. P. A. (2), 4, 282.
	"	4.51, amorphous.	Brügelmann. Ber. 13, 1741.

NAME.	FORMULA.	SP. GRAVITY.	AUTI
Barium oxide	Ba O	4.0	Fourcroy ger.
" "	"	4.2588	Tünnern Böttge
" "	"	4.7822	Karsten. 65, 89
" "	"	4.829	Playfair M. C.
" "	"	4.986	
" "	"	5.456	Filhol. 415.
" "	"	5.722, cryst.	Brügelm (2), 4,
" "	"	5.32 "	Brügelm 18, 17
Barium dioxide	Ba O_2	4.958	Playfair M. C.
Boron trioxide	B_2O_3	1.803	Davy.
" "	"	1.83	Berzeliu
" "	"	1.75	Breithau
" "	"	1.825, 21°.6	Favre a C. R.
" "	"	1.8766, 0°	Ditte. C
" "	"	1.8476, 12°	
" "	"	1.6988, 80°	
" "	"	1.848, 14°.4	Bedson liams 2554.
" "	"	1.853, 15°.8	
" " Fused	"	1.75	Quincke 642.
Aluminum trioxide	Al_2O_3	4.152, 4°	Royer a Quote P. A.
" "	"	3.944	Mohs haup by R
" "	"	4.004	
" "	"	4.154	Filhol. 21, 41
" "	"	3.928, cryst.	Ebelmen
" "	"	3.870 Artificial.	H. Ro 74, 4
" "	"	3.899	
" "	"	3.750 Heated in wind furnace	
" "	"	3.725	
" "	"	3.999, ignited in porcelain furnace.	
" "	"	4.0[illegible], [illegible] powdered.	
" "	"	[illegible]	Schaffg 74, 4
" "	"	[illegible]	
" "	"	[illegible]	[illegible]
" " Artificial cryst.	"	[illegible]	[illegible]
" " Ruby	Al_2O_3	[illegible]	[illegible]
" "	"	[illegible]	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
[A]luminum trioxide. Ruby	$Al_2 O_3$	3.95, natural	Williams. C. N. 28, 101.
" " "	"	3.7, artificial	
" " Sapphire	"	3.562	Muschenbroek. See Böttger.
" " "	"	3.9998	Schaffgotsch. P. A. 74, 429.
" " "	"	4.0001	
" " "	"	3.98	Williams. C. N. 28, 101.
" " "	"	3.990	Nilson and Pettersson. C. R. 91, 232.
" " Corundum	"	3.899, 15°.5	Schaffgotsch. P. A. 74, 429.
" " "	"	3.929	
" " "	"	3.974	
" " "	"	4.022	Deville. J. 8, 15.
" " "	"	3.992, after ignition.	
" " "	"	3.979 } 15°.5	Church. Geol. Mag. (2), 2, 320.
" " "	"	4.03	
Scandium trioxide	$Sc_2 O_3$	3.8	Cleve. C. R. 89, 420.
" "	"	3.864	Nilson. C. R. 91, 118.
Yttrium trioxide	$Yt_2 O_3$	4.842	Ekeberg. P. M. 14, 346.
" "	"	5.028, 22°	Cleve and Hoeglund. 1873.
" "	"	5.046	Nilson and Pettersson. C. R. 91, 232.
Indium trioxide	$In_2 O_3$	7.179	" "
Lanthanum trioxide	$La_2 O_3$	5.94	Hermann. J. 14, 192.
" "	"	5.296, 16°	Nordenskiöld. J. 14, 197.
" "	"	6.53. 17°	Cleve. B. S. C. 21, 196.
" "	"	6.480	Nilson and Pettersson. C. R. 91, 232.
Didymium trioxide	$Di_2 O_3$	6.64	Hermann. J. 14, 195.
" "	"	5.825, 14°	Nordenskiöld. J. 14, 197.
" "	"	6.852	Cleve. J. C. S. (2), 13, 340.
" "	"	6.950	Nilson and Pettersson. C. R. 91, 232.
" "	"	7.177 } 13°.5	Cleve. U. N. A. 1885.
" "	"	7.182	
Didymium pentoxide	$Di_2 O_5$	5.368, 15°	Brauner. Ber. 15, 113.
Samarium trioxide	$Sm_2 O_3$	8.311, 13°	Cleve. U. N. A. 1885.
" "	"	8.383, 15°	
Erbium trioxide	$Er_2 O_3$	8.8	Cleve and Hoeglund. B. S. C. 18, 195.
" "	"	8.9	
" "	"	8.640	Nilson and Pettersson. C. R. 91, 232.
Ytterbium trioxide	$Yb_2 O_3$	9.175	" "
Carbon dioxide. L.	$C O_2$	.9, —20°	Thilorier. Ann. (2), 60, 427.
" " "	"	.83, 0°	
" " "	"	.6, +30°	

Name.	Formula.	Sp. Gravity.	Auth
Carbon dioxide. L.	CO_2	.93, 0°	Mitchell. 77.
" " "	"	.8825, 6°.4	
" " "	"	.853, 10°.6	
" " "	"	.7385, 20°.8	
" " "	"	.9952, —10°	D'Andre (3), 56
" " "	"	.9710, —5°	
" " "	"	.9471, 0°	
" " "	"	.9222, +5°	
" " "	"	.8948, 10°	
" " "	"	.8635, 15°	
" " "	"	.8267, 20°	
" " "	"	.7831, 25°	
" " "	"	1.057, —34°	Cailletet thias. 1202.
" " "	"	1.016, —25°	
" " "	"	.966, —11°.5	
" " "	"	.910, —1°.6	
" " "	"	.907, +1°.3	
" " "	"	.868, 6°.8	
" " "	"	.840, 11°	
" " "	"	.788, 15°.9	
" " "	"	.726, 22°.2	
" " Solid	"	1.188	Landolt.
" " "	"	1.199	
" " "	"	1.58—1.6	Dewar. I Assoc.
Silicon monoxide	SiO	2.893, 4°	Mabery. 15.
Silicon dioxide. Artif.	SiO_2	2.20, 12°.5, m. of 9.	Schaffgo 68, 14
" "	"	2.822	Ullik. 2125. latin ignit
" "	"	2.824	
" " Quartz	"	2.653, cryst.	Scheerer
" " "	"	2.659, ameth'st	Breith J. 68
" " "	"	2.744 "	
" " "	"	2.651, smoky	
" " "	"	2.658 "	
" " "	"	2.661, rose	
" " "	"	2.658 "	
" " "	"	2.658 "	
" " "	"	2.618, milky	
" " "	"	2.6534	Beudai 474. of el ment
" " "	"	2.6541	
" " "	"	2.61	Neuman 23, 1.
" " "	"	2.655, 18°, m. of 5.	Schaffgo 68, 14
" " "	"	2.656, cryst.	Devill
" " "	"	2.22 after fusion.	
		2.65234, 18°	[illegible]

[illegible]

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Silicon dioxide. Quartz	Si O_2	2.6507, 0°	Dibbits. (Rock crystal.) Bei. 5, 81. Calculated from sp. g. determinations by Steinheil, data for expansion of water by Regnault and Kopp, and the expansion of quartz as determined by Pfaff and Fizeau.
" " "	"	2.6502, 5°	
" " "	"	2.6498, 10°	
" " "	"	2.6493, 15°	
" " "	"	2.6488, 20°	
" " "	"	2.6484, 25°	
" " "	"	2.6479, 30°	
" " "	"	2.6460, 50°	
" " "	"	2.6409, 100°	
" " Tridymite	Si O_2	2.295 } 15°-16°	Vom Rath. J. 21, 1001.
" " "	"	2.326	
" " "	"	2.282, 18°.5	
" " "	"	2.311	G. Rose. Ber. 2, 388.
" " "	"	2.317 Artif.	
" " "	"	2.378	
" " "	"	2.30, 16°, "	Hautefeuille. P. M. (5), 6, 78.
" " Asmannite	"	2.247	v. Rath. A. J. S. (3), 7, 149.
Titanium dioxide	Ti O_2	4.18	Klaproth.
" "	"	3.9311, artif.	Karsten. Schw. J. 65, 394.
" "	"	4.253, powder	Rose.
" "	"	4.255, ignited	
" " Rutile	"	4.249	Mohs. See Böttger.
" " "	"	4.244—4.245	Scheerer. P. A. 65, 296.
" " "	"	4.250	Breithaupt.
" " "	"	4.291	
" " "	"	4.420, 0°	Kopp.
" " "	"	4.56	Müller. J. 5, 347.
" " "	"	4.26, artificial.	Ebelmen. J. 4, 15, and J. 12, 14.
" " "	"	4.283 "	
" " "	"	4.3 "	Hautefeuille. J. 16, 212.
" " "	"	4.173—4.278	Lasaulx. J. 36, 1840.
" " Brookite	"	4.128	H. Rose.
" " "	"	4.131	
" " "	"	4.165	
" " "	"	4.166	
" " "	"	3.952, arkansite.	Breithaupt. J. 2, 780.
" " "	"	3.892	Rammelsberg. J. 2, 780.
" " "	"	3.949	
" " "	"	4.03, arkansite	Damour. J. 2, 781.
" " "	"	4.083 "	
" " "	"	4.085 "	Whitney. J. 2, 781.
" " "	"	4.22	Frödmann. J. 3, 704.
" " "	"	4.20	Beck. J. 3, 704.
" " "	"	4.1, artificial	Hautefeuille. J. 17, 214.
Anatase	"	3.857	Vauquelin.
	"	3.826	Mohs. See Böttger.
	"	3.75	Breithaupt.

NAME.	FORMULA.	SP. GRAVITY.	AUT
Titanium dioxide. Anatase	$Ti\ O_2$	3.82	Kobell.
" " "	"	3.890	H. Rose
" " "	"	3.912	
" " "	"	4.06	Damou
" " "	"	3.7, artificial	Hautefe 215.
" " "	"	3.9 "	
Germanium dioxide	$Ge\ O_2$	4.703, 18°	Winkle ref. 6
Zirconium dioxide	$Zr\ O_2$	4.30	Klaprot ger.
" "	"	5.5	Sjögren.
" "	"	4.9	Berlin.
" "	"	5.49	Herman
" "	"	5.742, 15°	Norden 114, 6
" "	"	5.710, 15°	
" "	"	5.624, 15°	
" "	"	5.42, cryst.	Knop. 52.
" "	"	5.52, noria.	Knop. 53.
" "	"	5.850	Nilson son. C
Tin monoxide	$Sn\ O$	6.666, 16°.5	Herapat 321.
" "	"	5.9797, 0°, olive	Ditte. 169. line. diffe ods.
" "	"	6.1083, 0°, dark green.	
" "	"	6.600, 0°, black	
" "	"	6.3254, 0°, dark violet.	
" "	"	6.4465, 0°, ditto heated to 300°.	
Tin dioxide	$Sn\ O_2$	6.96	Mohs.
" "	"	6.639, 16°.5	Herapat 321.
" "	"	6.90	Boullay 43, 26
" "	"	6.892	Breitha
" "	"	7.180	
" "	"	6.952	Neuma 23, 1.
" "	"	6.831, 0°	Kopp.
" " Artif. cryst.	"	6.72	Daubrée
" "	"	6.849	H. Rose
" "	"	6.978	
" "	"	6.712, 4°	Playfai J. C.
" "	"	6.753	Mallet.
" "	"	6.862	Bergem 661.
" "	"	6.842, 15°.5 colorless.	Ca[illegible]
" "	"	6.84[illegible]	
" "	"	6.754, 15°.5 yellow.	
" "	"	6.721, 15°.5 black.	
" " Artif. cryst.	"	[illegible]	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
dioxide. Artif. cryst.	$Sn\ O_2$	6.70	Levy and Bourgeois. Bei. 6, 531.
l hemioxide	$Pb_2\ O$	9.772	Playfair and Joule. M. C. S. 3, 83.
l monoxide	$Pb\ O$	9.277, 17°.5	Herapath. P. M. 64, 321.
"	"	9.500	Boullay. See Böttger.
"	"	9.2092	Karsten. Schw. J. 65, 394.
"	"	9.250	Playfair and Joule. M. C. S. 3, 84.
"	"	9.361	Filhol. Ann. (3), 21, 415.
"	"	9.3634, 4°	Playfair and Joule. J. C. S. 1, 187.
"	"	8.02, cryst.	Grailich. J. 11, 186.
"	"	9.1699, greenish yellow.	Ditte. C. R. 94, 1310. Samples differently prepared by boiling $Pb\ (O\ H)_2$ with K O H.
"	"	9.2089, yellow	
"	"	9.8835, brownish yellow.	
"	"	9.5605, greenish gray.	
"	"	9.4223, dark green.	
" "	"	9.3757	
" "	"	9.29, 15°, yellow cryst.	Geuther. A. C. P. 219, 60–61.
" "	"	9.126, 15°, red cryst.	
" "	"	9.125, 14°, red cryst.	
" "	"	9.09, 15°, red pulv.	
" "	"	8.74, 14°, red, very pure.	
ead dioxide	$Pb\ O_2$	8.902, 16°.5	Herapath. P. M. 64, 321.
" "	"	8.933	Karsten. Schw. J. 65, 394.
" "	"	8.756	Playfair and Joule. M. C. S. 3, 84.
" "	"	8.897	
" "	"	9.045	Wernicke. J. C. S. (2), 9, 306.
Minium	$Pb_3\ O_4$	8.94	Muschenbroek. Watts' Dict.
"	"	9.096, 15°	Herapath. P. M. 64, 321.
"	"	9.190	Boullay. Ann. (2), 43, 266.
"	"	8.62	Karsten. Schw. J. 65, 394.
dioxide	$Co\ O_2$	5.6059	" "
"	"	6.00	Hermann. J. P. C. 92, 113.
	"	6.93, 15°.5	Nordenskiöld. J. 14, 184.
	"	6.94, 15°.5	

Name.	Formula.	Sp. Gravity.	Au
Cerium dioxide	$Ce\ O_2$	7.09, 14°.5, cryst.	Norde 184.
" "	"	6.789	Nilsoı son. 232.
Thorium dioxide*	$Th\ O_2$	9.402	Berze 885.
" "	"	9.21	Norde Ch 184.
" "	"	9.077	Chyd 194.
" "	"	9.200	Chyd 194.
" "	"	9.861	Nilsoı son. 232.
" "	"	10.2199, 17°	Nilsoı
" "	"	10.2206, 17°	Nilsoı
" "	"	9.876, 15°	Troos C. 1
Nitrogen monoxide. L.	N_2O	.9756, —5°	D'An (3),
" "	"	.9370, 0°	D'An (3),
" "	"	.9177, +5°	D'An (3),
" "	"	.8964, 10°	D'An (3),
" "	"	.8704, 15°	D'An (3),
" "	"	.8365, 20°	D'An (3),
" "	"	.9004, 0°	Will.
" "	"	.9434	Wrob 97,
" "	"	1.002, —20°.6	Caill thi 12
" "	"	.952, —11°.6	Caill thi 12
" "	"	.930, —5°.5	Caill thi 12
" "	"	.912, —2°.2	Caill thi 12
" "	"	.849, +6°.6	Caill thi 12
" "	"	.810, 11°.7	Caill thi 12
" "	"	.758, 19°.8	Caill thi 12
" "	"	.698, 23°.7	Caill thi 12
Nitrogen tetroxide. L.	N_2O_4	1.451	Dulon 18,
" "	"	1.42	Mitsc J. 6
" "	"	1.4903, 0°	Thoı 37.
" "	"	1.43958, 21°.64	Thoı 37.
Phosphorus pentoxide	P_2O_5	2.387	Brisso
Vanadium dioxide	V_2O_2	3.64, 20°	Schafı 76,
Vanadium trioxide	V_2O_3	4.72, 16°, m. of 3.	Schafı 90,
Vanadium pentoxide	V_2O_5	3.472, 20°	Schafı 76,
" "	"	3.510, 20°	Schafı 76,
" "	"	3.35	J. J. V and mer
Arsenic trioxide	As_2O_3	3.[illegible]	LeRoy Gay
" "	"	3.[illegible]	L[illegible]
" "	"	3.[illegible]	L[illegible]

* [illegible] Nilson's [illegible] as the only

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Arsenic trioxide	As_2O_3	8.695, octahedral.	Guibourt. B. J. 7, 128.
" "	"	3.7885, amorphous.	
" "	"	3.729, 17°.2	Herapath. P. M. 64, 321.
" "	"	3.7026	Karsten. Schw. J. 65, 394.
" "	"	3.7202	
" "	"	3.798	Taylor. Gm. H.
" "	"	3.884	Filhol. Ann. (3), 21, 415.
" "	"	3.85, native	Claudet. J. 21, 230.
Arsenic pentoxide	As_2O_5	3.7342	Karsten. Schw. J. 65, 394.
" "	"	3.985	Playfair and Joule. M. C. S. 3, 83.
" "	"	4.023	
" "	"	4.250	Filhol. Ann. (3), 21, 415.
Antimony trioxide	Sb_2O_3	5.566	Mohs. See Böttger.
" "	"	5.778	Boullay. Ann. (2), 43, 266.
" "	"	6.6952	Karsten. Schw. J. 65, 394.
" "	"	5.251	Playfair and Joule. M. C. S. 3, 83.
" "	"	5.11, octahedral.	Terreil. J. P. C. 98, 154.
" "	"	3.72, prismatic.	
Valentinite	"	5.566	Dana's Mineralogy.
Senarmontite	"	5.22—5.30	" "
Antimony tetroxide	Sb_2O_4	4.074	Playfair and Joule. M. C. S. 3, 83.
Cervantite	"	4.084	Dana's Mineralogy.
Antimony pentoxide	Sb_2O_5	6.525	Boullay. Ann. (2), 43, 266.
" "	"	3.779	Playfair and Joule. M. C. S. 3, 83.
Bismuth trioxide	Bi_2O_3	8.211, 18°.3	Herapath. P. M. 64, 321.
" "	"	8.449	Le Royer and Dumas. See Böttger.
" "	"	8.1735	Karsten. Schw. J. 65, 394.
" "	"	8.079	Playfair and Joule. M. C. S. 3, 82.
" "	"	8.855	Schröder. Dm. 1873.
" "	"	8.868	
Bismuth tetroxide	Bi_2O_4	5.6, 20°	Muir, Hoffmeister, and Robbs. J. C. S. 39, 32.
Bismuth pentoxide	Bi_2O_5	5.917, 15°	Brauner and Watts. P. M. (5), 11, 60.
" "	"	5.919, 15°	
" "	"	5.1, 20°	Muir, Hoffmeister, and Robbs. J. C. S. 39, 32.
[illegible] pentoxide	Cb_2O_5	4.56, Extremes of several determinations.	H. Rose. J. 1, 405.
"	"	5.26	

NAME.	FORMULA.	SP. GRAVITY.	AUTHOR
Columbium pentoxide	Cb_2O_5	6.140 } From fusion with $K_2S_2O_7$	H. Rose. J. For full c[...] to modes [...] aration, [...] ter of [...] etc., see t[...] inal pap[...]
" "	"	6.146 }	
" "	"	6.48, ditto, ignited.	
" "	"	5.83, more strongly ignited.	
" "	"	5.90 } From $Cb\,Cl_5$	
" "	"	5.98 }	
" "	"	5.706 }	
" "	"	6.289 }	
" "	"	6.725, ditto, ignited.	
" "	"	5.79, more strongly ignited.	
" "	"	5.51	
" "	"	5.52	
" "	"	4.56 } Extremes of several determinations.	H. Rose. J.
" "	"	6.54 }	
" "	"	5.20 } 14°, cryst.	Nordenskiöl[...] 209.
" "	"	5.48 }	
" "	"	4.37, 4.46 } Prep. by two methods	Marignac. 198.
" "	"	4.51, 4.53 }	
" "	"	5.00	Hermann. J
" "	"	4.31	Knop. A. C 36.
Tantalum pentoxide	Ta_2O_5	7.03 } Extremes of several determinations.	H. Rose. J
" "	"	8.26 }	
" "	"	7.055 } From fusion with $K_2S_2O_7$	H. Rose. J For full see the paper.
" "	"	7.065 }	
" "	"	7.986, ditto, ignited.	
" "	"	7.028 } From $Ta\,Cl_5$	
" "	"	7.280 }	
" "	"	7.284, ditto, crystalline.	
" "	"	7.994, ditto, ignited.	
" "	"	7.652, ditto, more strongly.	
" "	"	8.257, ditto, in porcelain furnace.	
" "	"	7.00	Hermann. J
" "	"	7.35, from $Ta\,Cl_5$, ignited.	[illegible]
" "	"	8.01, from NH_4 salt.	

Name.	Formula.	Sp. Gravity.	Authority.
Tantalum pentoxide	Ta_2O_5	7.60 } From K	Marignac. J. P. C. 99, 33.
" "	"	7.64 } salt.	
" "	"	7.234	Oesten. P. A. 100, 342.
" "	"	7.253	
Sulphur dioxide. L.	SO_2	1.42	Faraday. P. T. 1823, 189.
" "	"	1.45	Bussy. P. A. 1, 237.
" "	"	1.4911, —20°.5	D'Andreéff. Ann. (3), 56, 317.
" "	"	1.4609, —9°.9	
" "	"	1.4384, —2°.08	
" "	"	1.4318, —0°.25	
" "	"	1.4252, +2°.8	
" "	"	1.4205, 4°.51	
" "	"	1.4102, 8°.27	
" "	"	1.4017, 11°.5	
" "	"	1.3887, 16°.43	
" "	"	1.3769, 20°.63	
" "	"	1.3673, 23°.91	
" "	"	1.3587, 26°.9	
" "	"	1.3513. 29°.57	
" "	"	1.3415, 32°.96	
" "	"	1.3350, 35.°29	
" "	"	1.3258, 38°.65	
" "	"	1.4338, 0°	Cailletet and Mathias. C. R. 104, 1563. 156° is the critical temperature.
" "	"	1.3757, 21°.7	
" "	"	1.3374, 35°.2	
" "	"	1.2872, 52°	
" "	"	1.2523, 62°	
" "	"	1.1845, 82°.4	
" "	"	1.1041, 102°.4	
" "	"	1.0166, 120°.45	
" "	"	.9560, 130°.3	
" "	"	.8690, 140°.8	
" "	"	.8065, 146°.6	
" "	"	.7317, 151°.75	
" "	"	.6706, 154°.3	
" "	"	.6370, 155°.05	
" "	"	.52, 156°	
Sulphur trioxide. S.	SO_3	1.9546, 13°	Morveau. Watts' Dict.
" " "	"	1.975	Baumgartner.
" " L.	"	1.97, 20°	Bussy. Ann. (2), 26, 411.
" " S.	"	1.92118 } 25°	Buff. A. C. P. 4th Supp., 129.
" " "	"	1.90915 }	
" " "	"	1.90814 }	
" " L.	"	1.81958 } 47°	
" " "	"	1.8105 }	
" " "	"	1.8101 }	
" " S.	"	1.940, 16°	Weber. P. A. 159, 318.
" " "	"	1.9365, 20°	Nasini. Ber. 15, 2885.
[illegible] dioxide	SeO_2	3.9538	Clausnizer. A. C. P. 196, 265.
[illegible] dioxide	TeO_2	5.93, 20°	Schafarik. J. P. C. 90, 12.
	"	5.7559, 12°.5	F. W. Clarke. A. J. S. (3), 14, 285.
	"	5.7841, 14°	

NAME.	FORMULA.	SP. GRAVITY.	A
Tellurium dioxide. Octahedral.	TeO_2	5.65, 0°	Klein R.
" " "	"	5.67, 0°	
" " "	"	5.68, 0°	
" " Orthorhombic.	"	5.88, 0°	
" " "	"	5.90, 0°	
" " "	"	5.91, 0°	
" " Calcined	"	5.68, 0°	
Tellurium trioxide	TeO_3	5.0704, 14°.5	F. W. S. (
" "	"	5.0794, 11°	
" "	"	5.1118, 11°	
Chromic oxide	Cr_2O_3	5.21, cryst.	Wöhl ger.
" "	"	4.909	Playf M.
" "	"	6.2, cryst.	Schiff
" "	"	5.010	Schrö 226
Chromic chromate	Cr_5O_9	4.0, 10°	Geutl
Chromium trioxide	CrO_3	2.676, m. of 2	Playf M.
" "	"	2.737, 14°, cryst	Ehl
" "	"	2.629, 14°, after fusion.	
" "	"	2.819, 20°	Schaf 90,
" "	"	2.775 Extremes	Zettn 474
" "	"	2.804 Extremes	
Molybdenum dioxide	MoO_2	5.67	Buch 121
" "	"	6.44, 16°	Maur anc
Molybdenum trioxide	MoO_3	3.460	Thom ger
" "	"	3.49	Berze
" "	"	4.49 native.	Wei M
" "	"	4.50 native.	
" "	"	4.39, 21°, cryst.	Schaf 90,
Tungsten dioxide	WO_2	12.1109	Karst 65,
Tungsten trioxide	WO_3	6.12	D'Ell
" "	"	5.274, 16°.5	Hem 321
" "	"	7.1396	Karst 65,
" "	"	6.302 cryst.	Nor 14
" "	"	6.384 cryst.	
" "	"	7.16, amorphous.	Zettn
" "	"	7.232, 17°, cryst.	
Uranous oxide	UO_2	10.15	Ebel 27,
Uranoso-uranic oxide	U_3O_8	7.1932	Karst 65,
" " "	"	7.31	Ebel 27,

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
anic oxide	UO_3	5.02 } two lots.	Brauner and Watts. P. M. (5), 11, 60.
" "	"	5.26	
lorine trioxide. L	Cl_2O_3	1.3298 } 0°	Brandau. Z. C. 13, 47.
" " "	"	1.387	
line pentoxide	I_2O_5	4.250	Filhol. Ann. (3), 21, 415.
" "	"	4.7987, 9°	Kammerer. P. A. 138, 401.
" "	"	4.487, 0°	Ditte. Z. C. 13, 303.
" "	"	5.037, 0°	Ditte. Ann. (4), 21, 10.
" "	"	5.020, 51°	
nganous oxide	Mn O	4.7264, 17°	Herapath. P. M. 64, 321.
" "	"	5.38	Playfair and Joule. M. C. S. 3, 80.
" "	"	5.091	Rammelsberg. J. 18, 378.
" " Manganosite.	"	5.18	Blomstrand. J. 28, 1209.
" "	"	5.010, 4°	Veley. J. C. S. 1882, 65.
ganoso-manganic ox-	Mn_3O_4	4.746	Playfair and Joule. M. C. S. 3, 80.
" " "	"	4.653	
" " "	"	4.325	Playfair and Joule. J. C. S. 1, 137.
" " "	"	4.718, artif.	Rammelsberg. J. 18, 378.
" " "	"	4.856, native	
" " "	"	4.80, artificial	Gorgeu. C. R. 96, 1146.
anic oxide	Mn_2O_3	4.82, braunite	Haidinger. Gm. H.
"	"	4.568 } artif.	Playfair and Joule. M. C. S. 3, 80.
"	"	4.619	
"	"	4.325, artif.	Rammelsberg. J. 18, 378.
"	"	4.752, braunite.	
anese dioxide	MnO_2	4.819, pyrolusite	Turner. See Böttger.
"	"	5.026 "	Rammelsberg. J. 18, 378.
"	"	4.838 "	Breithaupt. Dana's Min.
"	"	4.880 "	
"	"	4.826 "	Pisani. Dana's Min.
"	"	4.965 } polianite.	Dana and Penfield. A. J. S. (3), 35, 246.
"	"	5.040	
-ferric oxide	Fe_3O_4	5.094	Mohs. See Böttger.
" "	"	4.960	Gerolt. " "
" "	"	4.900	Leonhard. See Böttger.
" "	"	5.200	
" "	"	5.300, 16°.5	Herapath. P. M. 64, 321.
" "	"	5.400	Boullay. Ann. (2), 43, 266.
" "	"	5.480	
" "	"	5.168 } cryst. magnetite.	Kenngott. Dana's Min.
" "	"	5.180	
" "	"	5.453	Playfair and Joule. M. C. S. 3, 81.

NAME.	FORMULA.	SP. GRAVITY.	AUT
Ferroso-ferric oxide	Fe_3O_4	5.12, 0°, magnetite.	Kopp.
" " "	"	5.106	
" " "	"	5.148 "	Ramme
" " "	"	5.185	
" " "	"	4.86 two allotropic varieties	Moiss 21, :
" " "	"	5.00	
" " "	"	5.09	
" " "	"	5.21 artif. cryst.	Gorgeu. 1176.
" " "	"	5.25	
Ferric oxide	Fe_2O_3	5.251	Mohs.
" "	"	5.261	Breitha
" "	"	5.959, 16°.5, ppt.	Herapa 821.
" "	"	5.225	Boullay 43, 2(
" "	"	5.079, native	Neuma 23, 1.
" "	"	5.121, 12°.5	Kopp.
" "	"	4.679	Playfai M. C
" "	"	5.135, ignit'd	
" "	"	5.241 native	Ramme
" "	"	5.283	
" "	"	5.191	
" "	"	5.214 "	G. Rose
" "	"	5.230	
" "	"	5.169, ppt.	H. Ro 440.
" "	"	5.037, ignited	
" "	"	3.95, yellow	Tomma des, 1
Nickelous oxide	NiO	5.597	Playfai M. C
" "	"	5.745, furnace product.	Genth
" "	"	6.605, cryst.	
" "	"	6.398	Bergem 683.
" "	"	6.661	Ramme 282.
" "	"	6.8, cryst.	Ebelme
Nickelic oxide	Ni_2O_3	4.846, 16°.5	Herapa 821.
" "	"	4.814	Playfai M. C
Cobaltous oxide	CoO	5.597	"
" "	"	5.750, ignited	
Cobaltoso-cobaltic oxide	Co_3O_4	5.833	Ramme 282.
" " "	"	6.296	
Cobaltic oxide	Co_2O_3	5.322, 16°.5	Herapa 821.
" "	"	5.600	Boullay 69.
" "	"	4.814	Playfai M. C
Cuprous oxide	Cu_2O	6.052 16°.5	Herapa 821.
" "	"	6.093 16°.5	
" "	"	5.751	Karste 65, 8

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Cuprous oxide	Cu_2O	5.75	Leroyer and Dumas. See Böttger.
" "	"	5.746	Playfair and Joule. M. C. S. 3, 82.
" "	"	5.300	Persoz. J. P. C. 47, 84.
" "	"	5.342	
" "	"	5.375	
Cupric oxide	CuO	6.401, 16°.5	Herapath. P. M. 64, 321.
" "	"	6.130	Boullay. Ann. (2), 43, 266.
" "	"	6.4304	Karsten. Schw. J. 65, 394.
" "	"	5.90	Playfair and Joule. M. C. S. 3, 82.
" "	"	6.414, ignit'd	
" "	"	6.322	Filhol. Ann. (3), 21, 415.
" "	"	6.130	Persoz. J. P. C. 47, 84.
" "	"	6.225	
" "	"	6.400	
" "	"	6.451, furnace product.	Jenzsch. J. 12, 214.
" "	"	6.400	Hampe. Z. C. 18, 368.
" "	"	6.25, melaconite.	Whitney. J. 2, 728.
" "	"	5.952 "	Rammelsberg. P. A. 80, 287.
Ruthenium dioxide	RuO_2	7.2	Deville and Debray. J. 12, 236.

2d. Double and Triple Oxides.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Sodium uranium oxide	$Na_2U_2O_{10}$	6.912	Drenkmann. J. 14, 257.
Delafossite	$Cu'_2Fe'''_2O_3$	5.07, 25°	Friedel. C. R. 77, 211.
Spinel	$MgAl_2O_4$	3.452, artif.	Ebelmen. J. 4, 12.
"	"	3.48, natural	Breithaupt.
"	"	3.52 "	
"	"	3.523 "	Haidinger. Dana's Min.
"	"	3.631, 15°.5, nat.	Church. Geol. Mag. (2), 2, 320.
"	"	3.715, 15°.5, nat.	
"	"	3.77	Jeremejew. J. 37, 1918.
[illegible]	$ZnAl_2O_4$	4.580, artif.	Ebelmen. J. 4, 13.
"	"	4.317	G. Rose.
	"	4.589	
	"	4.89	Brush. A. J. S. (3), 1, 28.
	"	4.91	

NAME.	FORMULA.	SP. GRAVITY.	AU
Gahnite	$Zn\ Al_2\ O_4$	4.576	Genth J. 36
" Furnace product.	"	4.49—4.52	Schulz ner. 603.
Hercynite	$Fe''\ Al_2\ O_4$	3.91 }	Zippe.
"	"	3.95 }	
Chrysoberyl	$Gl\ Al_2\ O_4$	3.759, artif.	Ebelm
"	"	3.597 }	Rose. From ities.
"	"	3.689 }	
"	"	3.734 }	
"	"	3.835 }	Kokscl 976,
" Alexandrite	"	3.644 }	
"	"	3.734	Nilson son.
"	"	3.700 } 15°.5	{ Chu
"	"	3.860 } 15°.5	{ Ma
Calcium iron oxide	$Ca\ Fe'''_2\ O_4$	4.693	Percy. 45, 4
Magnesioferrite	$Mg\ Fe'''_2\ O_4$	4.568 }	Ramm 776.
"	"	4.611 }	
"	"	4.638 }	
Hetaerolite	$Zn\ Mn_2\ O_4$	4.933	Moore. 17.
Zinc iron oxide	$Zn\ Fe'''_2\ O_4$	5.132 cryst.	Ebelm
" " "	"	5.33 "	Gorgeu 47, 3
Zinc chromium oxide	$Zn\ Cr_2\ O_4$	5.309 "	Ebelm
Manganese chromium oxide.	$Mn\ Cr_2\ O_4$	4.87 "	"
Chromite	$Fe''\ Cr_2\ O_4$	4.321	Thoms Min.
"	"	4.498 }	Dana's
"	"	4.568 }	
Jacobsite	$Mg\ Fe'''_2\ O_4.\ 2\ Mn\ Fe'''_2\ O_4.$	4.75, 16°	Damou 168.
Chrompicotite	$2\ Fe''\ Al_2\ O_4.\ 3\ Mg\ Cr_2\ O_4.$	4.115, 20°	Peterse 106,

IX. INORGANIC SULPHIDES.

1st. Simple Sulphides.

NAME.	FORMULA.	SP. GRAVITY.	AU
Hydrogen monosulphide	$H_2\ S$	a .9, 1	Farada 197.
" "	"	.91, 18°.5	Bleekr 37,
Hydrogen persulphide	$H_2\ S_2$ or $H_2\ S_3$?	1.7342	Ramsa [illegible]
Sodium sulphide	$Na_2\ S$	2.471	[illegible]
Potassium sulphide	$K_2\ S$	2.130	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
ilver sulphide	Ag_2S	6.8501, artif.	Karsten. Schw. J. 65, 394.
" " Argentite	"	7.269	Dauber. J. 13, 748.
" " "	"	7.317	
" " Acanthite	"	7.31	Kenngott. J. 8, 908.
" " "	"	7.36	
" " "	"	7.164 extremes.	Dauber. J. 13, 748.
" " "	"	7.326	
" " Daleminzite	"	7.02	Breithaupt. J. 15, 709.
hallium sulphide	Tl_2S	8.00	Lamy. J. 15, 185.
ldhamite	CaS. (Impure)	2.58	Maskelyne. P. T. 1870, 196.
inc sulphide	ZnS	3.9235	Karsten. Schw. J. 65, 394.
" " Blende	"	4.060	Neumann. P. A. 23, 1.
" " "	"	4.063	Henry. J. 4, 756.
" " "	"	4.07	Kuhlmann. J. 9, 832.
" " "	"	4.05	Tschermak. S. W. A. 45, 603.
" " "	"	4.038	Genth. Am. Phil. Soc. 1882.
admium sulphide	CdS	4.5, artificial	Schüler. J. 6, 367.
" "	"	4.5 "	Söchting. Dana's Min.
" " Greenockite	"	4.605	Karsten. Schw. J. 65, 394.
" " "	"	4.908	Breithaupt. Watts' Dict.
" " "	"	4.80	Brooke. P. A. 51, 274.
Mercuric sulphide	HgS	8.124	Boullay. Ann. (2), 43, 266.
" "	"	8.0602	Karsten. Schw. J. 65, 394.
" "	"	8.090, cinnabar.	Moore. J. P. C. (2), 2, 319.
" "	"	7.701 natural, amorphous.	
" "	"	7.748	
" "	"	7.552, artif.	
" "	"	7.81, metacinnabar.	Penfield. A. J. S. (3), 29, 453.
Carbon monosulphide	CS	1.66, s.	Sidot. C. R. 81, 33.
Carbon disulphide	CS_2	1.272	Berzelius and Marcet. Schw. J. 9, 284.
" "	"	1.268	Cluzel. Gm. H.
" "	"	1 2693, 15°.1	Gay Lussac.
" "	"	1.265	Couërbe. Ann. (2), 61, 282.
" "	"	1.2823, 5°-10°	Regnault. P. A. 62, 50.
" "	"	1.2750, 10°-15°	
" "	"	1.2676, 15°-20°	
" "	"	1.29312, 0°	Pierre. C. R. 27, 213.

NAME.	FORMULA.	SP. GRAVITY.	AUT
Carbon disulphide	$C S_2$	1.29858, 0°	H. L. : P. 4t
" "	"	1.27904, 10°	
" "	"	1.26652, 17°	
" "	"	1.227431, 46°	
" "	"	1.2661, 20°	Haagen. 117.
" "	"	1.2665, 16°.06	Winkel 150, 5
" "	"	1.2176, 43°	Ramsay 463.
" "	"	1.29215, 0°	Thorp 37, :
" "	"	1.22242, 46°.04	
" "	"	1.2233 } 47°	Schiff. I
" "	"	1.2234 } 47°	
" "	"	1.2634, 20°	Nasini. I
" "	"	1.266, 15°.2	Friedbu 47, 52
" "	"	1.26569, 17°.86	Also othe er. 1 870.
" "	"	1.26446, 18°.58	
" "	"	1.25031, 28°.21	
" "	"	1.23863, 35°.96	
" "	"	1.2233, 46°.5	Schiff. I
Tin monosulphide	Sn S	4.8523	Karsten 65, 39
" "	"	5.267	Boullay 43, 26
" "	"	4.973	Schneid
" "	"	5.0802, 0°	Ditte. C
Tin disulphide	$Sn S_2$	4.415	Boullay 43, 26
" "	"	4.600	Karsten 65, 39
Lead sulphide	Pb S	7.5052, artif.	"
" " Galena	"	7.539	Breithau 11, 15
" "	"	6.9238, 4°, pulv	Playfair J. C.
" " Galena	"	7.568	Neuman 23, 1.
" " "	"	7.51	Tschern A. 45
" "	"	6.77, artificial	Schneid (2), 2
Lead sesquisulphide	$Pb_2 S_3$	6.335	Playfair M. C.
Cerium sulphide	$Ce_2 S_3$	[illegible]	Didier. 1461.
Thorium sulphide	$Th S_2$	8.29	Chyden 195.
Nitrogen sulphide	N S	[illegible]	Berthel eille.
" "	"	[illegible]	Michael 460.
[illegible]	P S	[illegible]	Dupré. 262.
[illegible]	[illegible]	[illegible]	"
[illegible]	[illegible]	[illegible]	[illegible]

Name.	Formula.	Sp. Gravity.	Authority.
dium disulphide	V_2S_2	4.2, scaly	Kay. J. C. S. 87, 728.
"	"	4.4, powder	
dium trisulphide	V_2S_3	3.7, scaly	" "
"	"	4.0, powder	
dium tetrasulphide	V_2S_4	4.70, 21°	Schafarik. J. P. C. 90, 12.
dium pentasulphide	V_2S_5	3.0	Kay. J.C.S.87,728.
ıic disulphide	As_2S_2	3.5444	Karsten. Schw. J. 65, 394.
"	"	3.240, realgar	Neumann. P. A. 28, 1.
"	"	3.556	Mohs. See Böttger.
nic trisulphide	As_2S_3	3.459	Karsten. Schw. J. 65, 394.
" "	"	3.48	Haidinger. Dana's Min.
" "	"	3.44—3.45	Guibourt. See Böttger.
" " Dimorphite	"	3.58	Scacchi. J. 5, 842.
imony trisulphide	Sb_2S_3	4.7520	Karsten. Schw. J. 65, 394.
" "	"	4.15, amorphous.	Fuchs. Watts' Dict.
" "	"	4.614, black	H. Rose. J. 6, 361.
" "	"	4.641, 16° "	
" "	"	4.280, red	
" "	"	4.421, ppt.	
" "	"	4.226, 26°.7, red	Cooke. Proc. Am. Acad. 1877.
		4.223, 23°, ppt.	
" "	"	4.228, 28°, gray	
		4.289, 27 "	
" "	"	4.892	Ditte. C. R. 102, 212.
" "	"	5.012	
" " Stibnite.	"	4.608	Neumann. P. A. 28, 1.
" " "	"	4.516	Haüy. Dana's Min.
" " "	"	4.62	Mohs. " "
nuth disulphide	Bi_2S_2	7.29, m. of 5	Werther. J. P. C. 27, 65.
nuth trisulphide	Bi_2S_3	7.591, 14°.5	Herapath. P. A. 64, 321.
" "	"	7.0001	Karsten. Schw. J. 65, 394.
" "	"	7.16, native	Forbes. P. M. (4), 29, 4.
enium sulphide	Se S	3.056, 0°	Ditte. Z. C. 14, 386.
" "	"	3.035, 52°	
lybdenite	MoS_2	4.591	Mohs. See Böttger.
"	"	4.444	Seibert. " "
ngsten disulphide	W_2S_2	6.26, 20°	Schafarik. J. P. C. 90, 12.
mic sulphide	Cr_2S_3	4.092	Playfair and Joule. M. C. S. 3, 89.
"	"	2.79, 10° two preparations.	Schafarik. J.P.C. 90, 12.
"	"	3.77, 19°	
hide.	Mn S	3.95—4.01	Leonhard. See Böttger.

Name.	Formula.	Sp. Gravity.	Au
Manganese monosulphide. Alabandite.	MnS	4.036	Bergem 1857,
Hauerite	MnS_2	3.463	Von H 1157.
Iron hemisulphide	Fe_2S	5.80	Playfai M. C
Iron monosulphide. Artif.	FeS	5.035, m. of 2	"
" " "	"	4.79	Ramme 263.
" " Troilite	"	4.787	Ramme 1306.
" " "	"	4.817	Ramme 904.
" " "	"	4.75	Smith.
Iron disulphide. Pyrite	FeS_2	5.000 }	Kenngo
" " "	"	5.028 }	
" " "	"	5.185	Zephar A. 12
" " "	"	5.042	Neuma 23, 1.
" " Marcasite	"	4.882	"
" " "	"	4.678 }	Dana's
" " "	"	4.847 }	
Ferric sulphide	Fe_2S_3	4.246	Playfai M. C.
" "	"	4.41	Ramme 262.
Complex sulphide of iron	Fe_8S_9	4.494	Ramme 195.
Pyrrhotite	Fe_7S_8	4.584	Kenngo 9, 578
"	"	4.564 }	
"	"	4.580 }	Ramme na's I
"	"	4.640 }	
Nickel hemisulphide	Ni_2S	6.05	Playfai M. C.
Millerite	NiS	4.601	Kenngo 9, 578
"	"	5.65	Ramme na's I
Polydymite	Ni_4S_5	4.808 } 18°.7	Laspeyr (2), 1
"	"	4.816 }	
Beyrichite	Ni_3S_4	4.7	Liebe. 840.
Cobalt disulphide	CoS_2	4.269	Playfai M. C.
Cobaltic sulphide	Co_2S_3	4.8	Hoffma
Copper hemisulphide	Cu_2S	5.792, 17.7	Herapat 321.
" "	"	5.975	Karsten 65, 39
" "	"	5.71	Kopp.
" "	"	5.782	Thomson Min.
" "	"	5.521—5.795	Schee[illegible]
" " Artif. cryst.	"	5.79	
" " [illegible]	"	5.80	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
pper monosulphide	$Cu S$	4.1684	Karsten. Schw. J. 65, 394.
" " Covellite	"	4.636	Zepharovich. J. 7, 810.
alladium hemisulphide	$Pd_2 S$	7.303, 15°	Schneider. P. A. 141, 532.
latinum monosulphide	$Pt S$	8.847, 16°.25	Böttger. J. P. C. 3, 267.
Platinum disulphide	$Pt S_2$	7.224, 18°.75	" "
" "	"	5.27	Schneider. P. A. 138, 604.
Platinum sesquisulphide	$Pt_2 S_3$	5.52	" "

2d. Sulpho-Salts of Arsenic, Antimony, and Bismuth.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Proustite	$Ag_3 As S_3$	5.524	Mohs.
"	"	5.53—5.59	Breithaupt. See Böttger.
"	"	5.552, 13°	G. Rose. P. A. 15, 472.
Xanthoconite	$Ag_9 As_3 S_{10}$	4.112—4.159	Breithaupt. J. P. C. 20, 67.
Guitermannite	$Pb_3 As_2 S_6$	5.94	Hillebrand. Bull. No. 20., U. S. G. S., 106.
Sartorite	$Pb As_2 S_4$	5.405	Waltershausen. J. 8, 914.
"	"	5.393	
"	"	5.409	
Dufrenoysite	$Pb_2 As_2 S_5$	5.5616	Landolt. P. A. 122, 373.
"	"	5.549	Damour. Ann. (3), 14, 379.
"	"	5.561	v. Rath. J. 17, 827.
Enargite	$Cu'_3 As S_4$	4.362	Kenngott. Dana's Min.
"	"	4.430	Breithaupt. J. 3, 702.
"	"	4.445	
"	"	4.37	Kobell. J. 18, 872.
"	"	4.34	Root. J. 21, 998.
"	"	4.43	Burton. J. 21, 998.
" Guayacanite	"	4.39	Field. J. 12, 771.
" Clarite	"	4.46	Sandberger. N. J. 1875, 382.
" Luzonite	"	4.42	Weisbach. M. P. M. 1874, 257.
Julianite	$Cu_4 As S_4$	5.12	Websky. Z. G. S. 1871, 486.
Binnite	$Cu_6 As_4 S_9$	4.477	Dana's Mineralogy.
Tennantite	$Cu'_8 As_2 S_7$	4.375	Phillips. See Böttger.
"	"	4.530	Scheerer. P. A. 65, 298.
"	"	4.622	Harrington. J. 37, 1911.

Name.	Formula.	Sp. Gravity.	Au
Sodium sulphantimonate	$Na_3 Sb S_4 . 9 H_2 O$	1.804 }	Schröd
" "	"	1.807 }	
Pyrargyrite	$Ag_3 Sb S_3$	5.881	Mohs.
"	"	5.73—5.84	Breith
			Böttg
Miargyrite	$Ag Sb S_2$	5.214 }	Weisba
"	"	5.242 }	
"	"	5.0725 } 20°	Rumpf.
"	"	5.0823 }	7, 51
" Artificial	"	5.28	Doelter
			11, 2
Stephanite	$Ag_5 Sb S_4$	6.269	Mohs.
			474.
"	"	6.275, 21°	H. Ros
"	"	6.28, 18°	Frenzel
Polybasite	$Ag_9 Sb S_6$	6.214	Dana's
"	"	6.009	Genth.
			Soc.,
Polyargyrite	$Ag_{24} Sb_2 S_{15}$	6.983 } 18°.2	Peterse
"	"	7.014 }	
Livingstonite	$Hg Sb_2 S_4$	4.81	Barcen
			(3), 8
" Artificial	"	4.928, 32°	Baker.
Jamesonite	$Pb_2 Sb_2 S_5$	5.616, 19°	Schaffg
			38, 4
"	"	5.601	Löwe.
" Massive	"	5.6788	Ramme
			77, 2
" Artificial	"	5.5	Doelter
			11, 2
Zinkenite	$Pb Sb_2 S_4$	5.303 } 12°.5	G. Rose
"	"	5.310 }	
"	"	5.21, 18°	Hillebr
			20, U
Boulangerite	$Pb_3 Sb_2 S_6$	5.688—5.941	Hausm
			46, 2
" Massive	"	5.809—5.877 }	Zephar
" Fibrous	"	5.69—6.086 }	A. 56
Meneghinite	$Pb_4 Sb_2 S_7$	6.339 }	v. Rath
"	"	6.445 }	
"	"	6.33	Harring
			1911.
Geocronite	$Pb_5 Sb_2 S_8$	6.407	Apjohn
"	"	6.43, 15°	Sauvag
			Mine
"	"	6.45—6.47, 15°	Kerndt
			302.
Plagionite	$Pb_4 Sb_6 S_{13}$	5.40	Ramme
			47, 4
Epiboulangerite	$Pb_{[illegible]} Sb_{[illegible]} S_{[illegible]}$	6.309	Websk
Semseyite	$Pb_{[illegible]} Sb_{[illegible]} S_{[illegible]}$	5.9518	Sipöcz.
Freieslebenite	$Pb_{[illegible]} Ag_{[illegible]} Sb_{[illegible]} S_{[illegible]}$	6.194	Hausm
			Min.
"	"	6.230	v. Pay
"	"	6.35	Vrba.
			14[illegible]
" Diaphorite	"	5.82	[illegible]

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Brongniardite	$Pb\ Ag_2\ Sb_2\ S_5$	5.950, 18°	Damour. Ann. d. Mines, (4), 16, 227.
Chalcostibite	$Cu\ Sb\ S_2$	4.748	H. Rose. Dana's Min.
"	"	5.015	Breithaupt. Dana's Min.
Famatinite	$Cu_3\ Sb\ S_4$	4.57	Stelzner. M. P. M. 1873, 242.
Guejarite	$Cu_2\ Sb_4\ S_7$	5.03	Cumenge. B. S. M. 2, 201.
Tetrahedrite	$Cu_8\ Sb_2\ S_7$	4.730	Wittstein. J. 8, 912.
"	"	4.58	Sandmann. A. C. P. 89, 368.
"	"	4.90	Kuhlemann. J. 9, 834.
"	"	4.885	Genth. Am. Phil. Soc. 1885.
Bournonite	$Cu'\ Pb\ Sb\ S_3$	5.703—5.796	Zincken. J. 2, 724.
"	"	5.726—5.855	Bromeis. J. 2, 724.
"	"	5.726—5.863	Rammelsberg. J. 2, 724.
"	"	5.80	Field. J. 14, 374.
"	"	5.826	Wait. J. 26, 1147.
"	"	5.737—5.86	Hidegh. J. 37, 1911.
"	"	5.7659	Sipöcz. Ber. 19, 95.
" Artificial	"	5.719	Doelter. Z. K. M. 11, 29.
Berthierite	$Fe\ Sb_2\ S_4$	4.043	Pettko. J. 1, 1159.
Silver bismuth glance*	$Ag\ Bi\ S_2$	6.92	Rammelsberg. Z. K. M. 3, 101.
Galenobismutite	$Pb\ Bi_2\ S_4$	6.88	Sjögren. G. F. F. 4, 109.
Cosalite	$Pb_2\ Bi_2\ S_5$	6.22—6.33	Frenzel. J. 27, 1238.
Beegerite	$Pb_6\ Bi_2\ S_9$	7.273	König. J. 34, 1355.
Rezbanyite	$Pb_4\ Bi_{10}\ S_{19}$	6.09	Frenzel. J. 36, 1835.
"	"	6.38	
Chiviatite	$Pb_2\ Bi_6\ S_{11}$	6.920	Rammelsberg. P. A. 88, 320.
Emplectite	$Cu\ Bi\ S_2$	5.18, 5°	Weisbach. J. 19, 916.
Wittichenite	$Cu_3\ Bi\ S_3$	4.3	Hilger. J. 18, 870.
Klaprotholite	$Cu_6\ Bi_4\ S_9$	4.6	Petersen. N. J. 1868, 415.
Aikinite	$Cu'\ Pb\ Bi\ S_3$	6.757	Frick. P. A. 31, 530.
"	"	6.1	Chapman. J. 1, 1158.
Kobellite	$Pb_3\ Bi\ Sb\ S_6$	6.29	Satterberg. P. A. 55, 635.
"	"	6.32	
"	"	6.145	Rammelsberg. J. P. C. 86, 340.

* Alaskaite, a lead silver salt similar to this, has a sp. gr. 6.878. Koenig, Z. K. M. 6, 42.

3d. Miscellaneous Double and Oxy-Sulphides.

Name.	Formula.	Sp. Gravity.	Authorit
Thallium potassium sulphide.	$K Tl S_2$	4.268	Schneider.] 139, 661.
Iron potassium sulphide	$K Fe''' S_2$	2.563	Preis. J.P.C.1
Sodium platinum sulphide	$Na Pt_2 S_3$	6.27, 15°	Schneider.] 138, 604.
Potassium platinum sulphide.	$K Pt_2 S_3$	6.44, 15°	" "
Stromeyerite	$Ag Cu' S$	6.26	Kopp. J. 16, (
"	"	6.255	Stromeyer. Sch 19, 325.
Jalpaite	$Ag_3 Cu' S_4$	6.877	Breithaupt. J 682.
"	"	6.890	
Sternbergite	$Ag Fe_2 S_3$	4.215	Dana's Miner
Silver gold sulphide	$Ag_{10} Au_4 S_{11}$	8.159	Muir. B.S.C.18
Argyrodite	$Ag_6 Ge S_5$	6.085, [illegible]°	Richter. Quot Winkler.
"	"	6.093 } 12°	Winkler. J.] (2), 34, 187.
"	"	6.111 } 12°	
Christophite	$Zn_2 Fe S_3$	3.911—3.931	Breithaupt. B Ztg. 22, 27.
Guadalcazarite	$Zn Hg_6 S_7$	7.15	Petersen. J.25,
Bornite	$Fe Cu_3 S_3$	5.030	Rammelsberg. S. 18, 19.
"	"	4.432	Forbes. J. 4, 7
"	"	4.91	Katzer. M. I 9, 404.
Iron copper sulphide. Artif	$Fe_4 Cu_9 S_{10}$	4.85	Doelter. Z. K 11, 29.
Barnhardtite	$Fe_2 Cu_4 S_5$	4.521	Genth. J. 8, 91
Chalcopyrite	$Fe Cu S_2$	4.185	Forbes. J. 4, 7
"	"	4.1—4.3	Dana's Minera
" Artificial	"	4.1[illegible]	Doelter. Z. K 11, 29.
Iron copper sulphide Artif	$Fe_4 Cu_4 S$[illegible]	4.[illegible]	" "
Furnace product. Cryst.	$Fe_2 Cu_4 S_5$	[illegible]	Brögger. Z. K 3. 495.
[illegible]	$Fe_2 Cu S_4$	4.[illegible]	Breithaupt. I 59, 325.
"	"	4.[illegible]42	
	"	4.[illegible]	Smith. J. 7, 81
[illegible]	[illegible]	4.[illegible]	Blomstrand. D Min., 2d Ap
[illegible]	[illegible]	4.[illegible]	Faber. J. 5, 84
		4.[illegible]	Smith and B J. 6, 782.
[illegible]	[illegible]	4.[illegible]	Scheerer. P. I 316.
[illegible]	[illegible]	4.[illegible]	Knop. N. J. 523.
[illegible]	[illegible]	[illegible]	Smith. J.C.S.[illegible]
[illegible]	[illegible]	[illegible]	Werther. J.[illegible]
[illegible]	[illegible]	[illegible]	Vogl. J. [illegible]
[illegible]	[illegible]	[illegible]	Dana's [illegible]

[illegible]

X. SELENIDES.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
ite	Ag_2 Se	8.0	G. Rose. P. A. 14, 471.
ıide	Zn Se	5.40, 15°	Margottet. J. C. S. 32, 570.
selenide	Cd Se	8.789	Little. J. 12, 94.
"	"	5.80	Margottet. J. C. S. 32, 570.
s selenide	Hg_2 Se	8.877	Little. J. 12, 95.
te	Hg Se	7.274	Dana's Mineralogy.
	"	7.1—7.37	Kerl. J. 5, 837.
	"	8.187	Penfield. A. J. S.
	"	8.188	(3), 29, 449.
ıide. Artificial	Pb Se	8.154	Little. J. 12, 95.
" Clausthalite	"	6.8	Zinken. P. A. 3, 274.
enide	Fe_2 Se_3	6.38	Little. J. 12, 94.
lenide	Ni Se	8.462	" "
enide	Co Se	7.647	" "
ite	Cu'_2 Se	6.71	Nordenskiöld. J. 20, 977.
lenide	Cu Se	6.655	Little. J. 12, 95.
riselenide	As_2 Se_3	4.752	" "
triselenide	Bi_2 Se_3	6.82	Schneider. J. 8, 386.
"	"	7.406	Little. J. 12, 95.
" Frenzelite	"	6.25, 21°	Frenzel. N. J. 1874, 679.
" Guanajuatite.	"	6.62	Fernandez. Dana's Min., 3d App.
selenide	Sn Se	5.24, 15°	Schneider. J. P. C. 98, 236.
"	"	6.179, 0°	Ditte. C. R. 96, 1792.
·nide	Sn Se_2	5.133	Little. J. 12, 95.
	"	4.85	Schneider. J. P. C. 98, 236.
	Cu′ Ag Se	7.48—7.51	Nordenskiöld. J. 20, 977.
e	$(Cu\ Ag\ Tl)_2$ Se	6.90	" "
ıite	(Pb Hg) Se	7.804—7.876	Dana's Mineralogy.
	(Pb Cu) Se	6.88	Pisani. J. 82, 1183.
	$(Pb\ Cu)_3$ Se_2	6.26	" "

XI. TELLURIDES.

NAME.	FORMULA.	SP. GRAVITY.	AUTHO
Hessite	$Ag_2 Te$	8.412 } 8.565 }	G. Rose. P
"	"		
"	"	8.178	Genth. J
"	"	8.318	Becke. Z 205.
Zinc telluride	$Zn Te$	6.34, 15°	Margottet 82, 570.
Cadmium telluride	$Cd Te$	6.20, 15°	"
Coloradoite	$Hg Te$	8.627	Genth. Z.
Tin telluride	$Sn Te$	6.478, 0°	Ditte. C. I
Altaite	$Pb Te$	8.159	G. Rose. I
"	"	8.060	Genth. J
Antimony telluride	$Sb_2 Te_3$	6.47 } 13°	Bödeker
" "	"	6.51 }	secke.
Joseite	$Bi_3 Te$	7.924—7.936	Dana's M
Wehrlite	$Bi_3 Te_2$	8.44	Wehrle. Min.
Tetradymite	$Bi_2 Te_3$	7.237	Genth. J
"	"	7.868	Jackson.
"	"	7.941	Genth. J
"	"	7.642, 18°	Balch. J.
Calaverite	$Au Te_4$	9.043	Genth. Z.
Sylvanite	$Au Ag Te_4$	7.943	Genth. J.
Petzite	$Au Ag_3 Te_2$	9.010 } 9.020 }	"
"	"		
Tapalpite	$Ag_2 Bi_2 S Te_2$	7.803	Rammelsb S. 21, 81

XII. PHOSPHIDES.

NAME.	FORMULA.	SP. GRAVITY.	AUTHO
Silver phosphide	$Ag_2 P_3$	4.63	Schrötter. 1849, 30
Zinc phosphide	$Zn_3 P_2$	4.76	"
" "	"	4.72	Haver. J 113.
Tin monophosphide	$Sn P$	6.56	Schrötter. 1849, 30.
" "	"	6.798	Natanson mann. 1460.
Tin diphosphide	$Sn P_2$	4.91, 12°	[illegible]
Chromium phosphide	$Cr P$	4.68	[illegible]
Manganese phosphide	$Mn_6 P_2$	5.951	[illegible]
" "	$Mn_3 P$	4.94	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Iron phosphide	$Fe_3 P$	6.28	Hvoslef. J. 9, 285.
" "	$Fe_3 P_4$	5.04	Freese. J. 20, 284.
Nickel phosphide	$Ni_5 P$	7.283	Jannetaz. J. C. S. 44, 651.
" "	$Ni_3 P_2$	5.99	Schrötter. S. W. A. 1849, 301.
Cobalt phosphide	$Co_3 P_2$	5.62	" "
Tricopper phosphide	$Cu_3 P$	6.75	" "
" "	"	6.59	Hvoslef. J. 9, 285.
" "	"	6.350	Sidot. J. R. C. 5, 75.
Copper monophosphide	Cu P	5.14	Emmerling. Ber. 12, 153.
Molybdenum monophosphide.	Mo P	6.167	Rautenberg. J. 12, 163.
Tungsten hemiphosphide	$W_2 P$	5.207	Wöhler. J. 4, 347.
Palladium diphosphide	$Pd P_2$	8.25	Schrötter. S. W. A. 1849, 301.
Platinum diphosphide	$Pt P_2$	8.77	" "
Iridium hemiphosphide *	$Ir_2 P$	13.768	Clarke. A. C. J. 5, 231.
Gold phosphide	$Au_2 P_3$	6.67	Schrötter. S. W. A. 1849, 301.

XIII. ARSENIDES.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Silver arsenide	Ag As	8.51	Descamps. J. Ph. C. (4), 27, 424.
Trisilver diarsenide	$Ag_3 As_2$	9.01	" "
Trisilver arsenide	$Ag_3 As$	9.51	" "
" " Huntilite	"	7.47	Wurtz. Dana's Min., 3d App.
Tricopper diarsenide	$Cu_3 As_2$	6.94	Descamps. J. Ph. C. (4), 27, 424.
Dicopper arsenide	$Cu_2 As$	7.76	" "
Tricopper arsenide	$Cu_3 As$	7.81	" "
" " Domeykite	"	7.75	Genth. J. 15, 708.
Algodonite	$Cu_6 As$	7.603	Genth. A. J. S. (2), 33, 192.
"	"	6.902	Field. J. 10. 655.
Whitneyite	$Cu_9 As$	8.408	Genth. J. 12, 771.
"	"	8.246 } 21°	Genth. J. 15, 708.
"	"	8.471 } 21°	
Tricadmium arsenide	$Cd_3 As$	6.26	Descamps. J. Ph. C. (4). 27, 424.
Tin hemiarsenide	$Sn_2 As$	7.001, 18°	Bödeker. B. D. Z.
Tin diarsenide	$Sn As_2$	6.56	Descamps. J. Ph. C. (4), 27, 424.
Lead arsenide	Pb As	9.55	" "
Trilead tetrarsenide	$Pb_3 As_4$	9.65	" "

* Commercial "cast iridium." Contains several per cent. of the phosphides of rhodium and ruthenium, with possibly a little phosphide of osmium.

Name.	Formula.	Sp. Gravity.	Autho
Trilead diarsenide	$Pb_3 As_2$	9.76	Descamps. (4), 27,
Kaneite	Mn As	5.55	Kane. D
Leucopyrite	$Fe_2 As_3$	6.659	Breithaup 115.
"	"	6.848	
Lölingite	$Fe As_2$	6.246, in mass.	Behncke
"	"	6.821, pulv.	
"	"	7.400	Hillebran (3), 27,
Trinickel arsenide	$Ni_3 As$	7.71	Descamps (4), 27,
Niccolite	Ni As	7.663	Scheerer. 292.
"	"	7.39, 16°	Ebelmen. Mines
"	"	7.314	Genth. J.
Rammelsbergite	$Ni As_2$	7.099—7.188	Breithaup Min.
"	"	6.9	McCay. J
Smaltite	$Co As_2$	6.84	Rose. J.
Skutterudite	$Co As_3$	6.78	Scheerer. 553.
Antimony hemiarsenide	$Sb_2 As$	6.46	Descamps (4), 27,
Allemontite	$Sb As_3$	6.13	Thomson. Min.
"	"	6.203	Ramme Dana's
Bismuth arsenide	$Bi_3 As_4$	8.45	Descamps (4), 27,
Gold arsenide	$Au_4 As_3$	16.20	"
O'Rileyite	$Cu'_2 Fe_8 As_3$	7.343—7.428	Waldie.

XIV. ANTIMONIDES.*

Name.	Formula.	Sp. Gravity.	Autho
Dyscrasite. Stibiotriargentite.	$Ag_3 Sb_2$	9.611	Petersen. 377.
" "	"	9.77	
Dyscrasite. Stibiohexargentite.	$Ag_6 Sb_2$	10.027	"
Zinc antimonide	Zn Sb	6.383	Cooke. 19, 413.
" "	"	6.384	
Trizinc diantimonide	$Zn_3 Sb_2$	6.327	"
Breithauptite	Ni Sb	7.541	Breithaup Min.
Tin antimonide*	$Sn_2 Sb$	7.07, 19°	Bödeker.

* Compare also the table of alloys.

XV. SULPHIDES WITH ARSENIDES OR ANTIMONIDES.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Arsenopyrite	Fe S As	6.269	Kenngott. S. W. A. 9, 584.
"	"	6.21	Vogel. J. 8, 907.
"	"	6.095, in mass.	Potyka. J. 12, 772.
"	"	6.004, pulv.	
"	"	6.255	Forbes. J. 18, 871.
"	"	6.16	Zepharovich. S. W. A. 56 (1), 42.
"	"	6.05—6.07	McCay. J. 37, 1905.
Pacite	$Fe_5 S_2 As_8$	6.297	Breithaupt and Weisbach. B. H. Ztz. 25, 167.
"	"	6.303	
Glaucopyrite	$Fe_{12} S_2 As_{24}$	7.181	Sandberger. J. P. C. (2), 1, 230.
Glaucodot	(Co Fe) S As	5.975—6.003	Breithaupt. P. A. 67, 127.
"	"	5.905—6.011	Schrauf and Dana. S. W. A. 69, 153.
Cobaltite	Co S As	6.0—6.3	Dana's Mineralogy.
Gersdorffite	Ni S As	5.49	Forbes. J. 21, 997.
"	"	5.65	
"	"	6.1977	Sipöcz. Ber. 19, 95.
Ullmannite	Ni S Sb	6.506, 20°	Rammelsberg. P. A. 64, 189.
"	"	6.808	Jannasch. J. 36, 1832.
"	"	6.883	
Corynite	Ni S (As Sb)	5.994	Zepharovich. J. 18, 872.
Wolfachite	"	6.372	Sandberger. J. 22, 1193.
Alloclasite	$Co_3 S_4 Bi_4 As_6$	6.6	Tschermak. J. 19, 919.
"	"	6.23—6.5	Frenzel. J. 36, 1831.

XVI. HYDRIDES, BORIDES, CARBIDES, SILICIDES, NITRIDES, ETC.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Sodium hydride	$Na_2 H$	0.959	Troost and Hautefeuille. C. R. 78, 970.
Palladium hydride	$Pd_2 H_2$	10.8083	Dewar. P. M. (4), 47, 334.
" "	$Pd_2 H$	11.06	Troost and Hautefeuille. C. R. 78, 970.
	Cb H	6.0 to 6.6	Marignac. J. 21, 214. Supposed to be metal.
	"	6.15 to 7.37	

Name.	Formula.	Sp. Gravity.	Authority
Platinum boride	Pt B	17.82	Martius. J. 1
Iron silico-carbide	$Fe_6 Si_2 C$	6.6	Colson. J. C 933.
Titanium carbide	Ti C, impure	5.10	Shimer. J. 1, 4.
Iron silicide	$Fe_2 Si$	6.611	Hahn. J. 1'
Platinum silicide	$Pt_3 Si_2$	14.1	Colson. Be 724.
" "	$Pt_2 Si$	18.97	Memminger. J. 7, 172.
Aluminum titanide	$Al_4 Ti$	3.11, 16°	Levy. C. R.
Aluminum zirconide (?)	$Al_3 Zr$, or $Al_6 Zr_2 Si$	3.629	Melliss. Gö Doct. Diss.
Ammonia. Liquefied	$N H_3$	.731, 15°.5	Faraday. P. 1 155.
" "	"	.6234, 0°	Jolly. J. 14
" "	"	.6492, —10°	
" "	"	.6429, —5°	
" "	"	.6364, 0°	
" "	"	.6298, 5°	D'Andreéff.
" "	"	.6230, 10°	(3), 56, 317
" "	"	.6160, 15°	
" "	"	.6089, 20°	
Titanium nitride	$Ti_2 N_2$	5.28, 18°	Friedel and (C. R. 82, 9'
Iron nitride. Impure	$Fe_5 N_2$	3.147	Silvestri. I 1356.

XVII. HYDROXIDES.

Name.	Formula.	Sp. Gravity.	Authori
Sodium hydroxide	Na O H	2.130	Filhol. Ann. 415.
" "	"	1.723	W. C. Smith J. P. 53, 1
" "	$2 Na O H. 7 H_2 O$	1.405	Hermes. J. 1
Potassium hydroxide	K O H	2.100	Dalton.
" "	"	2.044	Filhol. Ann. 415.
" "	"	1.958	W. C. Smith J. P. 53, 1
Brucite	$Mg (O H)_2$	2.36	Hermann. 979.
"	"	2.376	Beck. J. 15
" Artif. cryst.	"	2.36, 15°	Schulten. C. 72.
Zinc hydroxide	$Zn (O H)_2$	2.677	Nickl
" "	"	3.053	Filh
Cadmium hydroxide. Cryst.	$Cd (O H)_2$	4.79, 15°	

Name.	Formula.	Sp. Gravity.	Authority.
Calcium hydroxide	$Ca (O H)_2$	2.078	Filhol. Ann. (3), 21, 415.
Strontium hydroxide	$Sr (O H)_2$	3.625	" "
" "	$Sr (O H)_2 . 8 H_2 O$	1.396	" "
" "	"	1.911, 16°	Filhol. J. P. C. 36, 37.
Barium hydroxide	$Ba (O H)_2$	4.495	Filhol. Ann. (3), 21, 415.
" "	$Ba (O H)_2 . 8 H_2 O$	1.656	" "
" "	"	2.188, 16°	Filhol. J. P. C. 36, 37.
Lead hydroxide	$Pb (O H)_2 . 2 Pb O$	7.592, 0°	Ditte. J. C. S. 42, 928.
Lead oxyhydroxide	$Pb (O H)_2 O$	6.267	Wernicke. J. P. C. (2), 2, 419.
Manganese hydroxide. Cryst.	$Mn (O H)_2$	3.258, 15°	Schulten. C. R. 105, 1266.
Manganese oxyhydroxide	$Mn (O H)_2 O$	2.564 }	Wernicke. J. P. C. (2), 2, 419.
" "	"	2.596 }	
Manganite	$Mn_2 (O H)_2 O_2$	4.335	Rammelsberg. J. 18, 878.
Manganese hydroxide	$Mn_{12} H_2 O_{24}$	4.750 } 4°	Veley. J. C. S. 41, 65.
" "	"	4.800 } 4°	
" "	$Mn_{24} H_{18} O_{53}$	4.671 } 4°	" "
" "	"	4.681 } 4°	
Turgite	$Fe_4 (O H)_2 O_5$	3.56—3.74	Hermann. Dana's Min.
"	"	4.681	Bergemann. J. 12, 771.
"	"	4.14	Brush. A. J. S. (2), 44, 219.
Ferric oxyhydroxide	$Fe_2 (O H)_2 O_2$	2.91 }	Brunck and Graebe. Ber. 13, 725.
" "	"	2.92 }	
" " Göthite	"	4.11 }	Yorke. P. M. (3), 27, 265–267.
" " "	"	4.19 }	
" " "	"	4.24 }	
Limonite	$Fe_4 (O H)_6 O_3$	3.6—4.0	Dana's Mineralogy.
"	"	3.908	Bergemann. Dana's Min.
Ferric hydroxide	$Fe_2 (O H)_6$	3.77, precip.	Yorke. P. M. (3), 27, 269.
" " Limnite	"	2.69	Church. J. 18, 879.
Nickelic oxyhydroxide	$Ni_2 (O H)_4 O$	2.741	Wernicke. J. P. C. (2), 2, 419.
Cobaltic oxyhydroxide	$Co_2 (O H)_4 O$	2.483	" "
Heterogenite	$Co_5 O_7 . 6 H_2 O$	3.44	Frenzel. J. P. C. (2), 5, 404.
Copper hydroxide	$Cu (O H)_2$	3.368	Schröder. Dm. 1873.
Diaspore	$Al (O H) O$	3.39	Jackson. A. J. S. (2), 42, 108.
"	"	3.343	Shepard. A. J. S. (2), 50, 96.
Gibbsite	$Al (O H)_3$	2.387	Hermann. J. 1, 1164.
"	"	2.389	Silliman, Jr. J. 2, 389.
Stibiconite	$Sb_2 (O H)_2 O_3$	5.28	Blum and Delffs. J. P. C. 40, 318.

NAME.	FORMULA.	SP. GRAVITY.	
Antimonic hydroxide	Sb (O H)$_5$	6.6	Bo
Bismuth oxyhydroxide	Bi (O H)$_3$ O	5.571	W
" "	"	5.8, 20°	Mu
Metabismuthic hydroxide	Bi (O H) O$_2$	5.75, 20°	
Uranyl hydroxide	U (O H)$_2$ O$_2$	5.926, 15°	Ma
Eliasite	U (O H)$_4$ O	4.087—4.237	Ze
Gummite	U (O H)$_6$	3.9—4.20	Br
Chalcophanite	Zn Mn$_2$ O$_5$. 2 H$_2$ O	3.907	Mo
Namaqualite	Cu$_4$ Al (O H)$_{..}$. 2 H$_2$O	2.49	Ch
Hydrotalcite	Al Mg$_3$(O H)$_9$. 3 H$_2$O	2.04	He

XVIII. CHLORATES AND PERCHLORA

NAME.	FORMULA.	SP. GRAVITY.	
Hydrogen chlorate, or chloric acid.	H Cl O$_3$. 7 H$_2$ O	1.282, 14°.2	K
Sodium chlorate	Na Cl O$_3$	2.467	B
" "	"	2.289	B
Potassium chlorate	K Cl O$_3$	2.32643, 4°	I
" "	"	2.350, 17°.5	
" "	"	2.325	
" "	"	2.323	
" "	"	2.325, m. of 5	
" "	"	2.246 } Extremes	
" "	"	2.364 }	
" "	"	2.167	
Silver chlorate	Ag Cl O$_3$	4.430	
" "	"	4.439	
Thallium chlorate	Tl Cl O$_3$	5.5047, 9°	
Strontium chlorate	Sr Cl$_2$ O$_6$	3.150	
" "	"	3.154	
Barium chlorate	Ba Cl$_2$ O$_6$. H$_2$ O	2.988, 15°	
" "	"	3.214	
" "	"	3.188	
Lead chlorate	Pb Cl$_2$ O$_6$. H$_2$ O	4.018	
" "	"	4.030	
" "	"	4.063	

*Kammerer also gives figures for other hydrates.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Lead chlorate	$Pb\ Cl_2\ O_6.\ H_2\ O$	3.989	Topsoë. B. S. C. 19, 246.
Mercurous chlorate	$Hg\ Cl\ O_3$	6.409	Schröder. Dm. 1873.
Mercuric chlorate	$Hg\ Cl_2\ O_6$	4.998	" "
Basic mercuric chlorate	$Hg_2\ Cl_2\ O_7.\ H_2\ O$	5.151	Topsoë. B. S. C. 19, 246.
Hydrogen perchlorate, or perchloric acid.	$H\ Cl\ O_4$	1.782, 15°.5	Roscoe. J. 14, 146.
" "	$H\ Cl\ O_4.\ H_2\ O$	1.811, 50°	" "
Lithium perchlorate	$Li\ Cl\ O_4$	1.841	Wyrouboff. B. S. M. 6, 53.
Potassium perchlorate	$K\ Cl\ O_4$	2.528 }	Kopp. J. 16, 4.
" "	"	2.530 }	
" "	"	2.520, m. of 6 }	Schröder. Dm. 1873.
" "	"	2.510 } Ex- }	
" "	"	2.537 } tremes }	
Ammonium perchlorate	$Am\ Cl\ O_4$	1.885, 25°	Stephan. F. W. C.
Thallium perchlorate	$Tl\ Cl\ O_4$	4.844, 15°.5	Roscoe. C. N. 14, 217.

XIX. BROMATES.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Sodium bromate	$Na\ Br\ O_3$	3.339, 17°.5	Kremers. J. 10, 67.
Potassium bromate	$K\ Br\ O_3$	3.271, 17°.5	" "
" "	"	3.218	Topsoë. B. S. C. 19, 246.
" "	"	3.323, 19°	Storer. F. W. C.
Silver bromate	$Ag\ Br\ O_3$	5.1983, 16° }	" "
" "	"	5.2153, 18° }	
Magnesium bromate	$Mg\ Br_2\ O_6.\ 6\ H_2\ O$	2.289	Topsoë. B. S. C. 19, 246.
Zinc bromate	$Zn\ Br_2\ O_6.\ 6\ H_2\ O$	2.566	Topsoë. C. C. 4, 76.
Cadmium bromate	$Cd\ Br_2\ O_6.\ 2\ H_2\ O$	3.758	Topsoë. B. S. C. 19, 246.
Basic mercuric bromate	$Hg_2\ Br_2\ O_7.\ H_2\ O$	5.815	Topsoë. C. C. 4, 76.
Calcium bromate	$Ca\ Br_2\ O_6.\ H_2\ O$	3.329	" "
Strontium bromate	$Sr\ Br_2\ O_6.\ H_2\ O$	3.773	" "
Barium bromate	$Ba\ Br_2\ O_6$	4.0395, 17° }	Storer. F. W. C.
" "	"	3.9918, 18° }	
" "	$Ba\ Br_2\ O_6.\ H_2\ O$	3.820	Topsoë. C. C. 4, 76.
Lead bromate	$Pb\ Br_2\ O_6.\ H_2\ O$	4.950	" "
Nickel bromate	$Ni\ Br_2\ O_6.\ 6\ H_2\ O$	2.575	" "
Copper bromate	$Cu\ Br_2\ O_6.\ 6\ H_2\ O$	2.583	" "

XX. IODATES AND PERIODATES.

Name.	Formula.	Sp. Gravity.	Authority.
Hydrogen iodate,* or iodic acid.	$H\ I\ O_3$	4.869, 0°	Ditte. Ann. (4), 21, 22.
" "	"	4.816, 50°.8	
Sodium iodate	$Na\ I\ O_3$	4.277, 17°.5	Kremers. J. 10, 62
Potassium iodate	$K\ I\ O_3$	3.979, 17°.5	" "
" "	"	2.601	Ditte. Ann. (4), 21, 48.
" "	"	3.802, 18°	Clarke.
Ammonium iodate	$Am\ I\ O_3$	3.3372, 12°.5	Fullerton. F. W. C.
" "	"	3.3085, 21°	
Silver iodate. Precip.	$Ag\ I\ O_3$	5.4023, 16°.5	" "
" " Cryst. from ammonia.	"	5.6475, 14°.5	
Magnesium iodate	$Mg\ I_2\ O_6.\ 4\ H_2\ O$	3.283, 13°.5	Bishop. F. W. C.
Barium iodate	$Ba\ I_2\ O_6$	5.2299, 18°	Fullerton. F. W. C.
Lead iodate	$Pb\ I_2\ O_6$	6.209	Schröder. Dm. 1880
" "	"	6.248	
" "	"	6.257	
" "	"	6.155, 20°	Fullerton. F. W. C.
Nickel iodate	$Ni\ I_2\ O_6.\ 6\ H_2\ O$	3.6954, 22°	" "
Cobalt iodate	$Co\ I_2\ O_6.\ H_2\ O$	5.008, 18°	" "
" "	$Co\ I_2\ O_6.\ 6\ H_2\ O$	3.6659, 18°.5	" "
Didymium periodate	$Di\ I\ O_5.\ 4\ H_2\ O$	3.755, 21°.2	Cleve. U. N. A. 1885
" "	"	3.761, 21°.2	
Samarium periodate	$Sm\ I\ O_5.\ 4\ H_2\ O$	3.793, 21°.2	" "

XXI. THIOSULPHATES,† SULPHITES, DITHIONATES.

Name.	Formula.	Sp. Gravity.	Authority.
Sodium thiosulphate	$Na_2\ S_2\ O_3.\ 5\ H_2\ O$	1.672	Buignet. J. 14, 15
" "	"	1.736, 10°	Kopp. J. 8, 45.
" "	"	1.734	Schiff. J. 12, 41.
" "	"	1.72[illegible]	W. C. Smith. Am. J. P. 53, 148.
Potassium thiosulphate	$K_2\ S_2\ O_3$	2.590	Buignet. J. 14, 15
Magnesium thiosulphate	$Mg\ S_2\ O_3.\ [illegible]\ H_2\ O$	1.818, 24°	Oliver. F. W. C.
Calcium thiosulphate	$Ca\ S_2\ O_3.\ [illegible]\ H_2\ O$	1.8715, 13°.5	Richardson. F. W. C.
		1.87[illegible], 16°	
Strontium thiosulphate	$Sr\ S_2\ O_3.\ [illegible]\ H_2\ O$	2.17[illegible], 17°	" "
Barium thiosulphate	$Ba\ S_2\ O_3.\ H_2\ O$	3.44[illegible], 16°	" "
		[illegible]448[illegible], 18°	
Cobalt thiosulphate	$Co\ S_2\ O_3.\ [illegible]\ H_2\ O$	[illegible], 25°	Oliver. F. W. C.
[illegible]	[illegible]	[illegible], 15°. [illegible]	Geuther. A. [illegible] 224, 218.

* [illegible] Kaemmerer. P. A. 138, [illegible]

† [illegible]

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
ulphite	$Na_2SO_3 . 10H_2O$	1.561	Buignet. J. 14, 15.
sulphite. Red	$Cu_2SO_3 . H_2O$	4.46	Etard. Ber. 15, 2238.
" White	"	3.83, 15°	" "
dithionate, or ic acid.	$H_2S_2O_6$ + aq.	1.347	Gay Lussac. Gm. H. 2, 175.
dithionate	$Li_2S_2O_6 . 2H_2O$	2.158	Topsoë. C. C. 4, 76.
ithionate	$Na_2S_2O_6 . 2H_2O$	2.189	Topsoë. B. S. C. 19, 246.
"	"	2.175, 11°	Baker. C. N. 36, 208.
dithionate	$K_2S_2O_6$	2.277	Topsoë. B. S. C. 19, 246.
m dithionate	$Am_2S_2O_6$	1.704	Topsoë. C. C. 4, 76.
hionate	$Ag_2S_2O_6 . 2H_2O$	3.605	" "
m dithionate	$MgS_2O_6 . 6H_2O$	1.666	Topsoë. B. S. C. 19, 246.
onate	$ZnS_2O_6 . 6H_2O$	1.915	Topsoë. C. C. 4, 76.
dithionate	$CdS_2O_6 . 6H_2O$	2.272	" "
lithionate	$CaS_2O_6 . 4H_2O$	2.180	Topsoë. B. S. C. 19, 246.
"	"	2.176, 11°	Baker. C. N. 36, 208.
dithionate	$SrS_2O_6 . 4H_2O$	2.373	Topsoë. C. C. 4, 76.
ithionate	$BaS_2O_6 . 2H_2O$	4.536, 13°.5	Baker. C. N. 36, 208.
"	$BaS_2O_6 . 4H_2O$	3.142	Topsoë. C. C. 4, 76.
"	"	3.055, 24°.5	Stephan. F. W. C.
ionate	$PbS_2O_6 . 4H_2O$	3.245	Topsoë. C. C. 4, 76.
"	"	3.259, 11°	Baker. C. N. 36, 208.
e dithionate	$MnS_2O_6 . 6H_2O$	1.757	Topsoë. C. C. 4, 76.
onate	$FeS_2O_6 . 7H_2O$	1.875	" "
hionate	$NiS_2O_6 . 6H_2O$	1.908	" "
hionate	$CoS_2O_6 . 8H_2O$	1.815	" "

XXII. SULPHATES.

1st. Simple Sulphates.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
sulphate, or ic acid.	H_2SO_4	1.857	Bineau. Ann. (3), 24, 337.
"	"	1.8485	Ure. Schw. J. 35, 444.
"	"	1.854, 0°	Marignac. J. 6, 325.
"	"	1.842, 12°	Marignac. J. 6, 325.
"	"	1.834, 24°	Marignac. J. 6, 325.
"	"	1.857, 0°	Kolb. Z. A. C. 12, 333.
"	"	1.85289, 0°	Marignac. Ann. (4), 22, 420.
"	"	1.8354, 18°	Kohlrausch. P. A. 159, 243.
	"	1.82730, 23°	Nasini. Ber. 15, 2885.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORI[T]
Hydrogen sulphate, or sulphuric acid.	H_2SO_4	1.854, 0°	Schertel. B[…] 2784.
" "	"	1.8384, 15°	Lunge and […] Ber. 16, 95[…]
" "	"	1.83295, 19°.02	Mendelejeff. […] 17, ref. 804.
" "	"	1.8528, 0°	Mendelejeff. […] 19, 380.
" "	"	1.83904, 15°	Perkin. J.C[…] 777.
" "	"	1.83562, 20°	
" "	"	1.83265, 25°	
" "	$H_2SO_4.H_2O$	1.784, 8°	Wackenroder […] 249.
" "	"	1.7943, 0°	Mendelejeff. […] 19, 380.
" "	"	1.77806, 15°	Perkin. J.C[…] 777.
" "	"	1.77423, 20°	
" "	"	1.77071, 25°	
" "	$H_2SO_4.2H_2O$	1.62	Watts' Dictio[…]
" "	"	1.6655, 0°	Mendelejeff. […] 19, 380.
" "	"	1.65084, 15°	Perkin. J.C[…] 777.
" "	"	1.64754, 20°	
" "	"	1.64467, 25°	
" "	$H_2SO_4.3H_2O$	1.55064, 15°	"
" "	"	1.54754, 20°	
" "	"	1.54493, 25°	
Hydrogen pyrosulphate	$H_2S_2O_7$	1.9	Watts' Dictio[…]
Hydrogen tetrasulphate	$H_2SO_4 - 3SO_3$	1.983	Weber. P. […] 825.
Lithium sulphate	Li_2SO_4	2.210	Kremers. J. […]
" "	"	2.21, 15°	Brauner. P. […] 11, 67.
" "	$Li_2SO_4.H_2O$	2.02	Troost. J. 10, […]
" "	"	2.052, 21°	Pettersson. […] A. 1874.
" "	"	2.0[illegible], 20°	
" "	"	2.0[illegible], 20°	
Sodium sulphate	Na_2SO_4	2.462	Mohs. Quot[…] Schröder.
" "	"	2.67	Breithaupt. […] by Schröder
" "	"	2.[illegible]	Cordier. Quo[…] Schröder.
" "	"	2.[illegible]	Thomson. […] Phil. (2), 1[…]
" "	"	2.[illegible]	Karsten. Sch[…] 65, 394.
" "	"	2.[illegible]	Playfair and […] M. C. S. 2, […]
" "	"	2.[illegible]	Filhol. Ann[…] 21, 415.
" "	"	2.[illegible]	Kremers. J. [illegible]
" "	"	2.[illegible]	[illegible]
" "	"	2.[illegible]	[illegible]
" "	"	2.[illegible]	[illegible]
" "	"	2.[illegible] [illegible]	[illegible]

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
sulphate	Na_2SO_4	2.681, 20°.7	Favre and Valson. C. R. 77, 579.
"	"	2.677 } 17°	Pettersson. U. N. A. 1874.
"	"	2.687 } 17°	
"	"	2.66180, cryst. at 40°.	Nicol. P. M. (5), 15, 94.
"	"	2.66372, cryst. at 110°	
"	"	2.104, at the melting p't.	Braun. J. C. S. (2), 13, 31.
"	$Na_2SO_4.\ 10H_2O$	1.4457	Hassenfratz. Ann. 28, 3.
"	"	1.350	Thomson. Ann. Phil. (2), 10, 435.
"	"	1.469, m. of 2	Playfair and Joule. M. C. S. 2, 401.
"	"	1.520	Filhol. Ann. (3), 21, 415.
"	"	1.465	Schiff.
"	"	1.471	Buignet. J. 14, 15.
"	"	1.4608 }	Stolba. J. P. C. 97, 503.
"	"	1.4595 }	
"	"	1.455, 26°.5	Favre and Valson. C. R. 77, 579.
"	"	1.485, 19° }	Pettersson. U. N. A. 1874.
"	"	1.492, 20° }	
m sulphate	K_2SO_4	2.636	Wattson.
"	"	2.4073	Hassenfratz. Ann. 28, 3.
"	"	2.880	Thomson. Ann. Phil. (2), 10, 435.
"	"	2.6232	Karsten. Schw. J. 65, 394.
"	"	2.400	Jacquelain. A. C. P. 32, 234.
"	"	2.662	Kopp. A. C. P. 36, 1.
"	"	2.640	Playfair and Joule. M. C. S. 2, 401.
"	"	2.65606, 4°	Playfair and Joule. J. C. S. 1, 132.
"	"	2.625	Filhol. Ann. (3), 21, 415.
" Cryst.	"	2.644 }	Penny. J. 8, 338.
" After fusion.	"	2.657 }	
"	"	2.676	Holker. P. M. (3), 27, 213.
"	"	2.653	Schiff. A. C. P. 107, 64.
"	"	2.658	Schröder. P. A. 106, 226.
"	"	2.572	Buignet. J. 14, 15.
"	"	2.645	Stolba. J. P. C. 97, 503.
[illegible]	"	2.648	Topsoë and Christiansen.

Name.	Formula.	Sp. Gravity.	Authority
Potassium sulphate	K_2SO_4	2.660, 17°.1	Pettersson. U 1874.
" "	"	2.667, 18°.2	
" "	"	2.669, 18°.2	
" "	"	2.635, 18°.5	Richardson. F
" "	"	2.658. 14°	Wise. F. W
" "	"	2.715	W. C. Smith. J. P. 45, 1
" "	"	2.1, fused	Quincke. P. 141.
" "	"	2.6651, 0°	Spring. Be 1940. Det Bull. Aca gique IV., 1882.
" "	"	2.6627, 10°	
" "	"	2.6603, 20°	
" "	"	2.6577, 30°	
" "	"	2.6551, 40°	
" "	"	2.6522, 50°	
" "	"	2.6492, 60°	
" "	"	2.6456, 70°	
" "	"	2.6420, 80°	
" "	"	2.6366, 90°	
" "	"	2.6311, 100°	
" Not pressed	"	2.653, 21°	Spring. Be 2724.
" Once "	"	2.651, 22°	
" Twice "	"	2.656, 22°	
Potassium pyrosulphate	$K_2S_2O_7$	2.277	Jacquelain. P. 32, 234.
Rubidium sulphate	Rb_2SO_4	3.639, 16°.8	Pettersson. I 1874.
" "	"	3.641, 16°.8	
" "	"	3.6438, 0°	Spring. B 1940. De Bull. Aca gique IV., 1882.
" "	"	3.6402, 10°	
" "	"	3.6367, 20°	
" "	"	3.6333, 30°	
" "	"	3.6299, 40°	
" "	"	3.6256, 50°	
" "	"	3.6220, 60°	
" "	"	3.6181, 70°	
" "	"	3.6142, 80°	
" "	"	3.6089, 90°	
" "	"	3.6036, 100°	
Cæsium sulphate	Cs_2SO_4	4.105, 19°.2	Pettersson. A. 1874.
Ammonium sulphate	Am_2SO_4	1.7676	Hassenfratz. 28, 3.
" "	"	1.76	Kopp. J. L
" "	"	1.78	
" "	"	1.750	Playfair and M. C. S. 2
" "	"	1.76147, 4°	Playfair and J. C. S. 1,
" "	"	1.628	Schiff. A. C. 64.
" "	"	1.771, m. of 2	Schröder. P. 2[illegible]
" "	"	1.750	Baigent[illegible]
" "	"	1.770, m. of 4	[illegible]
" "	"	1.766 } extremes [illegible]	
" "	"	1.775 } [illegible]	
" "	"	1.7[illegible]	

Name.	Formula.	Sp. Gravity.	Authority.
ium sulphate	Am_2SO_4	1.765, 20°.5	Wilson. F. W. C
"	"	1.773	Schröder. Ber. 11, 2211.
"	"	1.7763, 0°	Spring. Ber. 15, 1940. Details in Bull. Acad. Belgique. IV., No. 8, 1882.
"	"	1.7748, 10°	
"	"	1.7734, 20°	
"	"	1.7719, 30°	
"	"	1.7703, 40°	
"	"	1.7685, 50°	
"	"	1.7667, 60°	
"	"	1.7641, 70°	
"	"	1.7617, 80°	
"	"	1.7593, 90°	
"	"	1.7567, 100°	
Not pressed	"	1.773, 20°	Spring. Ber. 16, 2724.
Once "	"	1.750, 22°	
Twice "	"	1.760, 22°	
nite	$Am_2SO_4 . H_2O$	1.72—1.73	Dana's Mineralogy.
ulphate	Ag_2SO_4	5.341	Karsten. Schw. J. 65, 394.
"	"	5.322	Playfair and Joule. M. C. S. 2, 401.
"	"	5.410	Filhol. Ann. (3), 21, 415.
"	"	5.425	Schröder. P. A. 106, 226.
"	"	5.49, 11°	Pettersson. U. N. A. 1874.
"	"	5.54, 11°	
m sulphate	Tl_2SO_4	6.77	Lamy. J. 15, 186.
"	"	6.603	Lamy and Des Cloizeaux. Nature 1, 116.
"	"	6.79, 17°.8	Pettersson. U. N. A. 1874.
"	"	6.81, 17°.2	
"	"	6.83, 17°	
m sulphate	$GlSO_4$	2.443	Nilson and Pettersson. C. R. 91, 232.
"	$GlSO_4 . 4H_2O$	1.725	Topsoë. C. C. 4, 76.
"	"	1.6743, 22°	H. Stallo. F. W. C.
"	"	1.713	Nilson and Pettersson. C. R. 91, 232.
ium sulphate	$MgSO_4$	2.6066	Karsten. Schw. J. 65, 394.
"	"	2.706, m. of 2	Playfair and Joule. M. C. S. 2, 401.
"	"	2.628	Filhol. Ann. (3), 21, 415.
"	"	2.675, 16°	Pape. P. A. 120, 367.
"	"	2.770, 13°.8	Pettersson. U. N. A. 1876.
"	"	2.795, 14°	
"	"	2.488	Schröder. J. P. C. (2), 19, 266. Two modifications.
"	"	2.471	
"	"	2.829	
[illegible]	"	2.709, 15°	Thorpe and Watts. J. C. S. 37, 102.
	$SO_4 . H_2O$	2.517, native	Bischof. Dana's Min.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORI[TY]
Magnesium sulphate	$Mg\ S\ O_4.\ H_2\ O$	2.281, 16°	Pape. P. A 869.
" "	"	2.339, 14°	Pettersson. U 1876.
" "	"	2.340, 16°.5	
" "	"	2.385	Schröder. J. (2), 19, 266
" "	"	2.478, m. of 2	Playfair. J. 37, 102.
" "	"	2.445, 15°	Thorpe and J. C. S. 37,
" "	$Mg\ S\ O_4.\ 2\ H_2\ O$	2.279	Playfair. J. 37, 102.
" "	"	2.373, 15°	Thorpe and J. C. S. 37,
" "	$Mg\ S\ O_4.\ 5\ H_2\ O$	1.869, m. of 2	Playfair. J. 37, 102.
" "	$Mg\ S\ O_4.\ 6\ H_2\ O$	1.751	"
" "	"	1.734, 15°	Thorpe and J. C. S. 37,
" Two modi-	"	1.6151	Schulze. P. 31, 229.
" fications.	"	1.8981	
" "	$Mg\ S\ O_4.\ 7\ H_2\ O$	1.6603	Hassenfratz. 28, 3.
" "	"	1.751	Mohs. See B
" "	"	1.674	Kopp. A. 36, 1.
" "	"	1.660	Playfair and M. C. S. 2,
" "	"	1.6829, 4°	Playfair and J. C. S. 1,
" "	"	1.751	Filhol. Ann. 415.
" "	"	1.685	Schiff. A. C. 64.
" "	"	1.675	Buignet. J.
" "	"	1.636, 15°.5	Forbes. P. 135.
" "	"	1.665, 15°.5	Holker. P. 27, 213.
" "	"	1.701, 16°	Pape. P. A 373.
" "	"	1.684, 15°.4	Pettersson. U 1876.
" "	"	1.691, 15°.5	
" "	"	1.680	Schröder. Du
" "	"	1.675	Schröder. J. (2), 19, 266
" "	"	1.682	W. C. Smith J. P. 53, 1[illegible]
" "	"	1.678, 15°	Thorpe and J. C. S. 37
Zinc sulphate	$Zn\ S\ O_4$	3.681, m. of 2	Playfair and M. C. S. 2,
" "	"	3.400	Karsten. Sc 65, 394.
" "	"	3.400	Filhol. An 21, 415.
" "	"	3.435, 16°	Pape. P. A 367.

Name.	Formula.	Sp. Gravity.	Authority.
sulphate	$Zn\,S\,O_4$	3.520	Schröder. J. P. C. (2), 19, 266.
"	"	3.552	
"	"	3.580	
"	"	3.6235, 15°	Thorpe and Watts. J. C. S. 37, 102.
"	$Zn\,S\,O_4.\ H_2\,O$	3.215, 16°	Pape. P. A. 120, 369.
"	"	3.076	Schröder. J. P. C. (2), 19, 266.
"	"	3.259	Playfair. J. C. S. 37, 102.
"	"	3.2845, 15°	Thorpe and Watts. J. C. S. 37, 102.
"	$Zn\,S\,O_4.\ 2\,H_2\,O$	2.958, 15°	" "
"	$Zn\,S\,O_4.\ 5\,H_2\,O$	2.206, 15°	" "
"	$Zn\,S\,O_4.\ 6\,H_2\,O$	2.056	Playfair. J. C. S. 37, 102.
"	"	2.072, 15°	Thorpe and Watts. J. C. S. 37, 102.
"	$Zn\,S\,O_4.\ 7\,H_2\,O$	1.912	Hassenfratz. Ann. 28, 3.
"	"	2.036	Mohs. See Böttger.
"	"	1.931, m. of 4	Playfair and Joule. M. C. S. 2, 401.
"	"	2.036	Filhol. Ann. (3), 21, 415.
"	"	1.953	Schiff. A. C. P. 107, 64.
"	"	1.957	Buignet. J. 14, 15.
"	"	1.9534	Stolba. J. P. C. 97, 503.
"	"	1.976, 15°.5	Holker. P. M. (3), 27, 213.
"	"	1.901, 16°	Pape. P. A. 120, 374.
"	"	2.015	Schröder. Dm. 1873.
"	"	1.953	Schröder. J. P. C. (2), 19, 266.
"	"	1.955	
"	"	1.961	W. C. Smith. Am. J. P. 53, 148.
"	"	1.974, 15°	Thorpe and Watts. J. C. S. 37, 102.
nium sulphate	$Cd\,S\,O_4$	4.447	Schroder. J. P. C. (2), 19, 266.
" "	$Cd\,S\,O_4.\ H_2\,O$	2.939	Buignet. J. 14, 15.
" "	$3\,Cd\,S\,O_4.\ 8\,H_2\,O$	3.05, 12°	Giesecke. B. D. Z.
urous sulphate	$Hg_2\,S\,O_4$	7.560	Playfair and Joule. M. C. S. 2, 401.
uric sulphate	$Hg\,S\,O_4$	6.466	" "
um sulphate	$Ca\,S\,O_4$	2.9271	Karsten. Schw. J. 65, 394.
" "	"	2.955	Neumann. P. A. 23, 1.
" "	"	3.102	Filhol. Ann. (3), 21, 415.
" " **Artificial cryst.**	"	2.969	Manross. J. 5, 9.
" " **Anhydrite**	"	2.983	Schrauf. J. 15, 756.

Name.	Formula.	Sp. Gravity.	Authori
Calcium sulphate. Anhydrite.	$Ca\,S\,O_4$	2.92, 15°	Fuchs. J. I
" "	"	2.736 }	Two lots. Sc Dm. 1878.
" "	"	2.759 }	
" "	"	2.884	
" " Artificial cryst.	"	2.98	Gorgeu. Ai 4, 515.
" "	$2\,Ca\,S\,O_4.\ H_2\,O$	2.757	Johnston. (2), 18, 82
" "	$Ca\,S\,O_4.\ 2\,H_2\,O$	2.322	Leroyer and
" "	"	2.310	Mohs.
" "	"	2.307	Breithaupt. S 68, 291.
" "	"	2.331	Filhol. Ar 21, 415.
" " Gypsum	"	2.317, m. of 15.	Kenngott. J
" "	"	2.3057	Stolba. J. I 503.
" " Powder	"	2.2745, 19°.4	Pettersson. I 1874.
" " "	"	2.3228, 18°.2	
" " Splinters	"	2.3086, 18°	
" " "	"	2.3223, 18°	
Strontium sulphate. Celestite.	$Sr\,S\,O_4$	3.973	Breithaupt. Min.
" " "	"	3.9593	Beudant. I Min.
" " "	"	3.96	Hunt. Dan
" " "	"	3.86	Mohs.
" " "	"	3.962, 15°	Kopp.
" " "	"	3.955	Neumann. 23, 1.
" " Artificial cryst.	"	3.927	Manross. J
" "	"	3.949	Schröder. I ganz. Bd
" " Ppt.	"	3.5883	Karsten. S 65, 394.
" " "	"	3.770	Filhol. Ann 415.
" " "	"	3.707	Schröder. P 226.
" " Ppt. ignited.	"	3.6679, 18°	Schweitzer. Amer. A 201.
" "	"	3.6949	
" " unignited.	"	3.7388	
" " "	"	3.9502, 18°	
" " "	"	3.9514	
" " "	"	3.9702	
" " Artif. cryst.	"	3.9	Gorgeu. A 4. 515.
Barium sulphate	$Ba\,S\,O_4$	4.42	Breithaupt.
" "	"	4.446	Mohs. See
" "	"	4.3008	Karsten. S 65, 394.
" "	"	4.4655, [illegible]	Kopp.
" " Barite	"	4.429	Neumann. 23, 1.
" " "	"	4.473	[illegible]
" " "	"	4.482	[illegible]

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
a sulphate. Barite	Ba S O_4	4.4794	G. Rose. P. A. 75, 409.
" powder.	"	4.4804	
" Precip.	"	4.5271	
" "	"	4.5253	
" Artif. cryst.	"	4.179	Manross. J. 5, 9.
"	"	4.022	Precipitates in different conditions. Schröder. P. A. 106, 226.
"	"	4.065	
"	"	4.512	
" Ppt. ignited.	"	4.2942, 18°	Schweitzer. University of Missouri. Special pub., 1876.
" Ppt. dried at 95°.	"	4.2688, 18°	
" Ppt.	"	4.4591, 18°	
" "	"	4.4881, 18°	
" "	"	4.3958, 14°.9	E. Wiedemann. P. M. (5), 15, 371.
" "	"	4.3969, 14°.9	
" "	"	4.3962, 14°.5	
" "	"	4.3967, 14°.5	
" Artif. cryst.	"	4.44—4.50	Gorgeu. Ann. (6), 4, 515.
ulphate	Pb S O_4	6.298	Mohs.
"	"	6.1691	Karsten. Schw. J. 65, 394.
"	"	6.30	Filhol. Ann. (3), 21, 415.
"	"	6.35	Smith. J. 8, 969.
"	"	6.20	Field. J. 14, 1022.
" Native	"	6.329	Schröder. P. A. Ergänz. Bd. 6, 622.
" Precip.	"	6.212	
"	"	5.96, 17°.1	Pettersson. U. N. A. 1874.
"	"	5.97, 16°.8	
" Artif. cryst.	"	6.16	Gorgeu. Ann. (6), 4, 515.
nese sulphate	Mn S O_4	3.1, 14°	Bödeker. B. D. Z.
"	"	3.192, 16°	Pape. P. A. 120, 368.
"	"	2.954	Schröder. Dm. 1873.
"	"	2.975	Schröder. J. P. C. (2), 19, 266.
"	"	3.235, 14°.6	Pettersson. U. N. A. 1876.
"	"	3.260, 14°	
"	"	3.386	Playfair. J. C. S. 37, 102.
"	"	3.282, 15°	Thorpe and Watts. J. C. S. 37, 102.
"	Mn S O_4. H_2O	2.870, 14°.2	Pettersson. U. N. A. 1876.
"	"	2.903, 15°.4	
"	"	2.905, 14°.9	
"	"	3.210	Playfair. J. C. S. 37, 102.
"	"	2.845, 15°	Thorpe and Watts. J. C. S. 37, 102.
" Szmikite	"	3.15	Schröckinger. J. 30, 1296.
"	Mn S O_4. 2 H_2O	2.526, 15°	Thorpe and Watts. J. C. S. 37, 102.
[illegible]	Mn S O_4. 3 H_2O	2.356, 15°	" "
	[illegible] S O_4. 4 H_2O	2.261	Topsoë. C. C. 4, 76

NAME.	FORMULA.	SP. GRAVITY.	AUTHORI
Manganese sulphate	$Mn\,SO_4.\ 5\,H_2O$	1.834	Gmelin.
" "	"	2.087	Kopp. A. 86, 1.
" "	"	2.095	
" "	"	2.059, 16°	Pape. P. 872.
" "	"	2.099, 16°.2	Pettersson. 1876.
" "	"	2.103, 17°.6	
" "	"	2.107, 15°.2	
" "	"	2.103, 15°	Thorpe and J. C. S. 3
Ferrous sulphate	$Fe\,SO_4$	2.841	Filhol. A 21, 415.
" "	"	3.138	Playfair an M. C. S.
" "	"	3.48	Playfair. J 37, 102.
" "	"	3.346, 15°	Thorpe and J. C. S. 3
" "	$Fe\,SO_4.\ H_2O$	3.047	Playfair. J 37, 102.
" "	"	2.994, 15°	Thorpe and J. C. S. 3
" "	$Fe\,SO_4.\ 2\,H_2O$	2.778, 15°	"
" "	$Fe\,SO_4.\ 3\,H_2O$	2.268, 16°	Pape. P. 371.
" "	$Fe\,SO_4.\ 4\,H_2O$	2.227, 15°	Thorpe and J. C. S. 3
" "	$Fe\,SO_4.\ 7\,H_2O$	1.8399	Hassenfratz 28, 3.
" "	"	1.857, m. of 3	Playfair an M. C. S.
" "	"	1.8889, 4°	Playfair an J. C. S. 1
" "	"	1.904	Filhol. Ann 415.
" "	"	1.884	Schiff. A. C 64.
" "	"	1.902	Buignet. J
" "	"	1.851, 15°.5	Holker. P. 27, 214.
" "	"	1.9854, 16°	Pape. P. 372.
" "	"	1.881	Schröder. D
" "	"	1.897	Schröder. J (2), 19, 26
" "	"	1.896	W. C. Smit J. P. 58,
[illegible]	[illegible]	[illegible]	
" "	"	[illegible]	Pettersson. A. 1874.
" "	"	[illegible]	
[illegible]	[illegible]	[illegible]	Dana's Min
"	"	[illegible]	Breithaupt. K. M. [illegible]
[illegible]	[illegible]	[illegible]	Schrauf. [illegible]
[illegible]	[illegible]	[illegible]	Pape. [illegible]
		[illegible]	
" "	"	[illegible]	

Name.	Formula.	Sp. Gravity.	Authority.
sulphate	$Ni\,S\,O_4$	3.526	Playfair. J. C. S. 37, 102.
"	"	3.418, 15°	Thorpe and Watts. J. C. S. 37, 102.
"	$Ni\,S\,O_4.\ 6\,H_2\,O$	2.042	Topsoë. C. C. 4, 76.
"	"	2.074	
"	"	2.031, 15°	Thorpe and Watts. J. C. S. 37, 102.
"	$Ni\,S\,O_4.\ 7\,H_2\,O$	2.037	Kopp. A. C. P. 86, 1.
"	"	1.931	Schiff. A. C. P. 107, 64.
" Morenosite	"	2.004	Fulda. J. 17, 859.
"	"	1.877, 16°	Pape. P. A. 120, 373.
"	"	1.955, 14°	Pettersson. U. N. A. 1876.
"	"	1.949, 15°	Thorpe and Watts. J. C. S. 37, 102.
sulphate	$Co\,S\,O_4$	3.531	Playfair and Joule. M. C. S. 2, 401.
"	"	3.614, 15°.6	Pettersson. U. N. A. 1876.
"	"	3.615, 16°	
"	"	3.444	Playfair. J. C. S. 37, 102.
"	"	3.472, 15°	Thorpe and Watts. J. C. S. 37, 102.
"	$Co\,S\,O_4.\ H_2\,O$	3.125, 15°	" "
"	$Co\,S\,O_4.\ 2\,H_2\,O$	2.712	Playfair. J. C. S. 37, 102.
"	"	2.668, 15°	Thorpe and Watts. J. C. S. 37, 102.
"	$Co\,S\,O_4.\ 4\,H_2\,O$	2.327, 15°	" "
"	$Co\,S\,O_4.\ 5\,H_2\,O$	2.134, 15°	" "
"	$Co\,S\,O_4.\ 6\,H_2\,O$	2.019, 15°	" "
"	$Co\,S\,O_4.\ 7\,H_2\,O$	1.924	Schiff. A. C. P. 107, 64.
"	"	1.958, 15°.6	Pettersson. U. N. A. 1876.
"	"	1.964, 15°.5	
"	"	1.958	Schröder. J. P. C. (2), 19, 266.
"	"	1.918, 15°	Thorpe and Watts. J. C. S. 37, 102.
r sulphate	$Cu\,S\,O_4$	3.631	Playfair and Joule. M. C. S. 2, 401.
"	"	3.572	Karsten. Schw. J. 65, 394.
"	"	3.530	Filhol. Ann. (3), 21, 415.
"	"	3.527, 16°	Pape. P. A. 120, 368.
"	"	3.707, 19°	Favre and Valson. C. R. 77, 579.
"	"	3.82, 17°.1	Pettersson. U. N. A. 1874.
"	"	3.83, 18°	
"	"	3.651, 11°	Hampe. Z. C. 13, 367.
	"	3.83	Schröder. J. P. C. (2), 19, 266.

NAME.	FORMULA.	SP. GRAVITY.	AUTHOR
Copper sulphate	$Cu\,S\,O_4$	3.606, 15°	Thorpe and J. C. S. 3
" "	$Cu\,S\,O_4 . H_2\,O$	3.125, 16°	Pape. P. 870.
" "	"	3.235, 17°.2	Pettersson. A. 1874.
" "	"	3.239, 18°.1	
" "	"	3.246, 18°	
" "	"	3.088	Schröder. (2), 19, 2
" "	"	3.206	Playfair. 37, 102.
" "	"	3.289, 15°	Thorpe and J. C. S. 3
" "	$Cu\,S\,O_4 . 2\,H_2\,O$	2.808, 16°	Pape. P. 871.
" "	"	2.878	Playfair. 37, 102.
" "	"	2.891	
" "	"	2.953, 15°	Thorpe and J. C. S. 3
" "	$Cu\,S\,O_4 . 3\,H_2\,O$	2.663, 15°	"
" "	$2\,Cu\,S\,O_4 . 7\,H_2\,O$	2.648, 15°	"
" "	$Cu\,S\,O_4 . 5\,H_2\,O$	2.1943	Hassenfratz 28, 3.
" "	"	2.2	Gmelin.
" " Native	"	2.297	Breithaupt 11, 151.
" "	"	2.274	Kopp. A. 86, 1.
" "	"	2.254	Playfair an M. C. S.
" "	"	2.286	Filhol. An 415.
" "	"	2.2422, 4°	Playfair an J. C. S. 1
" "	"	2.2781, 4°	
" "	"	2.2901, 4°	
" "	"	2.302	Buignet.
" "	"	2.2778	Stolba. J. 503.
" "	"	2.2[illegible], 16°	Pape. P. A
" "	"	2.248, 18°.9	Favre and C. R. 77,
" "	"	[illegible], 1[illegible]°.4	Pettersson. A. 1874.
" "	"	[illegible], 20°	
" "	"	[illegible]	Schröder.
" "	"	[illegible]	Schröder. (2), 19, 2
" "	"	[illegible]	
" "	"	[illegible]	Rüdorff. 251.
" "	"	[illegible]	W. C. Smi J. P. 53,
" "	"	[illegible]	Thorpe an J. C. S.
[illegible] sulphate	[illegible]	[illegible]	Favre [illegible] C. R. [illegible]
" "	"	[illegible]	[illegible]
" "	[illegible]	[illegible]	

Name.	Formula.	Sp. Gravity.	Authority.
Chromic sulphate	$Cr_2(SO_4)_3 . 15H_2O$	1.867, 17°.2	Favre and Valson. C. R. 77, 579.
Aluminum sulphate	$Al_2(SO_4)_3$	2.7400	Karsten. Schw. J. 65, 394.
" "	"	2.171	Playfair and Joule. M. C. S. 2, 401.
" "	"	2.672, 22°.5	Favre and Valson. C. R. 77, 579.
" "	"	2.710 } 17°	Pettersson. U. N. A. 1874.
" "	"	2.716 } 17°	Pettersson. U. N. A. 1874.
" "	$Al_2(SO_4)_3 . 18H_2O$	1.671, m. of 2	Playfair and Joule. M. C. S. 2, 401.
" "	"	1.569	Filhol. Ann. (3), 21, 415.
" "	"	1.767, 22°.1	Favre and Valson. C. R. 77, 579.
Indium sulphate	$In_2(SO_4)_3$	3.438	Nilson and Pettersson. C. R. 91, 232.
Scandium sulphate	$Sc_2(SO_4)_3$	2.579	" "
Yttrium sulphate	$Y_2(SO_4)_3$	2.606, 19°.4	Pettersson. U. N. A. 1876.
" "	"	2.615, 15°	Pettersson. U. N. A. 1876.
" "	"	2.626, 19°.3	Pettersson. U. N. A. 1876.
" "	"	2.612	Nilson and Pettersson. C. R. 91, 232.
" "	$Y_2(SO_4)_3 . 8H_2O$	2.52	Cleve and Hoeglund. B. S. C. 18, 200.
" "	"	2.53	Topsoë. Quoted by Pettersson.
" "	"	2.531, 19°.6	Pettersson. U. N. A. 1876.
" "	"	2.537, 19°.4	Pettersson. U. N. A. 1876.
" "	"	2.552, 15°	Pettersson. U. N. A. 1876.
" "	"	2.540	Nilson and Pettersson. C. R. 91, 232.
Erbium sulphate	$Er_2(SO_4)_3$	3.518, 14°.5	Pettersson. U. N. A. 1876.
" "	"	3.524, 14°.2	Pettersson. U. N. A. 1876.
" "	"	3.678	Nilson and Pettersson. C. R. 91, 232.
" "	$Er_2(SO_4)_3 . 8H_2O$	3.17	Cleve and Hoeglund. B. S. C. 18, 200.
" "	"	3.230, 16°.4	Pettersson. U. N. A. 1876.
" "	"	3.242, 16°.6	Pettersson. U. N. A. 1876.
" "	"	3.248, 17°.1	Pettersson. U. N. A. 1876.
" "	"	3.180	Nilson and Pettersson. C. R. 91, 232.
Ytterbium sulphate	$Yb_2(SO_4)_3$	3.793	" "
" "	$Yb_2(SO_4)_3 . 8H_2O$	3.286	" "
Lanthanum sulphate	$La_2(SO_4)_3$	3.53, 13°.6	Pettersson. U. N. A. 1876.
" "	"	3.67, 15°.4	Pettersson. U. N. A. 1876.
" "	"	3.600	Nilson and Pettersson. C. R. 91, 232.
" "	"	3.544 } 15°	Brauner. S. W. A. June, 1882.
" "	"	3.545 } 15°	Brauner. S. W. A. June, 1882.
" "	$La_2(SO_4)_3 . 9H_2O$	2.827	Topsoë. Quoted by Pettersson.
" "	"	2.848, 17°.2	Pettersson. U. N. A. 1876.
" "	"	2.864, 17°.4	Pettersson. U. N. A. 1876.
" "	"	2.853	Nilson and Pettersson. C. R. 91, 232.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Cerium sulphate	$Ce_2(SO_4)_3$	3.916, 12°.5	Pettersson. A. 1876.
" "	"	3.912	Nilson and [illegible] son. C. R. [illegible]
" "	$Ce_2(SO_4)_3 . 5H_2O$	3.214, 14°.2	Pettersson. U. 1876.
" "	"	3.232, 14°	
" "	"	3.220	Nilson and [illegible] son. C. R.
Didymium sulphate	$Di_2(SO_4)_3$	3.722, 14°.6	Pettersson. U. 1876.
" "	"	3.756, 15°.6	
" "	"	3.735	Nilson and [illegible] son. C. R.
" "	"	3.662, 18°.3	Cleve. U. 1885.
" "	"	3.672, 18°.3	
" "	$Di_2(SO_4)_3 . 8H_2O$	2.82	Cleve and Ho[illegible] B. S. C. 18[illegible]
" "	"	2.877, 16°.4	Pettersson. U. 1876.
" "	"	2.886, 14°.8	
" "	"	2.878	Nilson and [illegible] son. C. R. [illegible]
" "	"	2.827, 14°.8	Cleve. U. N. A.
" "	"	2.828, 16°.2	
" "	"	2.831, 16°	
Samarium sulphate	$Sm_2(SO_4)_3$	3.898, 18°8	"
" "	$Sm_2(SO_4)_3 . 8H_2O$	2.928, 18°.3	"
" "	"	2.932, 18°.3	
Thorium sulphate	$Th(SO_4)_2$	4.053, 22°.8	Clarke. A. 2, 175.
" "	"	4.2252, 17°	Krüss and N[illegible] Ber. 20, 167
" "	$2Th(SO_4)_2 . 9H_2O$	3.398, 24°	Clarke. A. 2, 175.
" "	$Th(SO_4)_2 . 9H_2O$	2.767	Topsoë. B. 21, 120.
Uranyl sulphate	$UO_2 . SO_4 . 3H_2O$	3.280, 16°.5	H. Schmidt. F.

2d. Double and Triple Sulphates.*

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Sodium hydrogen sulphate	$NaHSO_4$	2.742	Playfair and [illegible] M. C. S. 2,
Potassium hydrogen sulphate	$KHSO_4$	[illegible]	Thomson. Phil. (2), [illegible]
"		[illegible]	Jacquelain. P. 32, [illegible]
		[illegible]	Playfair [illegible] M. C. S. [illegible]
		[illegible]	Playfair [illegible]

* [illegible] double sulph[illegible]

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Potassium hydrogen sulphate.	$K\,H\,S\,O_4$	2.305, cryst.	Schröder. Dm. 1878.
" " "	"	2.354 } cryst.	
" " "	"	2.355 } mass.	
" " "	"	2.091, after fusion.'	
" " "	"	2.245, cryst.	Wyrouboff. B. S. M. 7, 7.
Ammonium hydrogen sulphate.	$Am\,H\,S\,O_4$	1.761, m. of 2	Playfair and Joule. M. C. S. 2, 401.
" " "	"	1.787	Schiff. A. C. P. 107, 64.
Sodium potassium sulphate.	$Na_2\,S\,O_4.\ 3\,K_2\,S\,O_4$	2.668	Two lots. Penny. J. 8, 333.
" " "	"	2.671	
Lithium ammonium sulphate.	$Am\,Li\,S\,O_4$	1.164 } two modifications	Wyrouboff. B. S. M. 5, 42.
" " "	"	1.204 }	
Sodium ammonium sulphate.	$Am\,Na\,S\,O_4.\ 2\,H_2\,O$	1.63	Schiff. A. C. P. 114, 68.
Potassium ammonium sulphate.	$Am\,K\,S\,O_4$	2.280	Schiff. A. C. P. 107, 64.
Guanovulite	$Am_2\,K_7\,H_3\,(S\,O_4)_6.\ 4\,H_2\,O$	2.33	Wibel. Ber. 7, 393.
"		2.65	
Glauberite	$Na_2\,Ca\,(S\,O_4)_2$	2.767	Breithaupt. Schw. J. 68, 291.
"	"	2.64	Ulex. J. 2, 776.
Syngenite	$K_2\,Ca\,(S\,O_4)_2.\ H_2\,O$	2.603, 17°.5	Zepharovich. J. 25, 1143.
"	"	2.252	Rumpf. Dana's Min., 2d Supp.
Dreelite	$Ca\,S\,O_4.\ 3\,Ba\,S\,O_4$	3.2—3.4	Dana's Mineralogy.
Polyhalite	$K_2\,Ca_2\,Mg\,(S\,O_4)_4.\ 2\,H_2\,O$	2.7689	" "
Krugite	$K_2\,Ca_4\,Mg\,(S\,O_4)_6.\ 2\,H_2\,O$	2.801	Precht. Ber. 14, 2138.
Simonyite	$Na_2Mg(SO_4)_2.\ 4H_2O$	2.244	Tschermak. J. 22, 1241.
Loewite	$Na_4Mg_2(SO_4)_4.\ 5H_2O$	2.376	Haidinger. J. 1, 1220.
Kröhnkite	$Na_2Cu(SO_4)_2.\ 2H_2O$	2.5	Domeyko. Dana's Min., 3d Supp.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Potassium magnesium sulphate.	$K_2\,Mg\,(S\,O_4)_2$	2.676	Playfair and Joule. M. C. S. 2, 401.
" " "	"	2.735	Schröder. Ber. 7, 1117.
" " "	"	2.750	
" " "	$K_2Mg(SO_4)_2.\ 6H_2O$	2.076, m. of 2	Playfair and Joule. M. C. S. 2, 401.
" " "	"	2.05319, 4°	Playfair and Joule. J. C. S. 1, 138.
" " "	"	1.995	Schiff. A. C. P. 107, 64.
" " "	"	2.024	Topsoë and Christiansen.
" " "	"	2.034	Schröder. Dm. 1873.
" " "	"	2.036	Schröder. J. P. C. (2), 19, 266.
" " "	"	2.048	
Ammonium magnesium sulphate.	$Am_2\,Mg\,(S\,O_4)_2$	2.080	" "

Name.	Formula.	Sp. Gravity.	Auth[ority].
Ammonium magnesium sulphate.	$Am_2 Mg (SO_4)_2$	2.095	Schröder. (2), 19,
" "	"	2.141	
" "	$Am_2 Mg (SO_4)_2 . 6 H_2O$	1.696	Gmelin.
" "	"	1.721	Playfair M. C. S
" "	"	1.71686, 4°	Playfair J. C. S
" "	"	1.680	Schiff. A. 64.
" "	"	1.762	Buignet.
" "	"	1.720	Topsoë a iansen.
" "	"	1.723	Schröder. (2), 19,
" "	"	1.727	
Potassium zinc sulphate	$K_2 Zn (SO_4)_2$	2.816	Playfair M. C. S
" " "	"	2.946	Various ferently Schröd (2), 19,
" " "	"	2.891	
" " "	"	3.027	
" " "	"	2.703	
" " "	"	2.733	
" " "	$K_2 Zn (SO_4)_2 . 6 H_2O$	2.153	Kopp. A
" " "	"	2.245	Playfair M. C.
" " "	"	2.24034, 4°	Playfair J. C. S
" " "	"	2.153	Schiff. A 64.
" " "	"	2.249	Schröder
" " "	"	[illegible]	Schröder (2), 19
" " "	"	2.240	
Ammonium zinc sulphate	$Am_2 Zn (SO_4)_2$	[illegible]	Playfair M. C.
" " "	"	[illegible]	Schröder (2), 19
" " "	"	[illegible]	
" " "	$Am_2 Zn (SO_4)_2 . 6 H_2O$	[illegible]	Playfair M. C.
" " "	"	[illegible]	Schiff. 64.
" " "	"	[illegible]	
" " "	"	[illegible]	Schröder
" " "	"	[illegible]	(2), 19
Potassium cadmium sulphate	$K_2 Cd (SO_4)_2 . 6 H_2O$	[illegible]	Schiff. 64.
Ammonium cadmium sulphate	$Am_2 Cd (SO_4)_2 . 6 H_2O$	[illegible]	"
Potassium manganese sulphate	$K_2 Mn (SO_4)_2$	[illegible]	Playfair M. C.
" "		[illegible]	Schröder 1118.
" "		[illegible]	Schröder (2), 1[illegible]
" "	$K_2 Mn (SO_4)_2 . 6 H_2O$	[illegible]	"
Ammonium manganese sulphate.	$Am_2 Mn (SO_4)_2 . 6 H_2O$	[illegible]	[illegible]
		[illegible]	[illegible]
"		[illegible]	
Potassium nickel sulphate	$K_2 Ni (SO_4)_2$	[illegible]	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
ium iron sulphate	$K_2Fe(SO_4)_2.6H_2O$	2.202	Playfair and Joule. M. C. S. 2, 401.
" "	"	2.189	Schiff. A. C. P. 107, 64.
onium iron sulphate	$Am_2Fe(SO_4)_2.6H_2O$	1.848, m. of 2	Playfair and Joule. M. C. S. 2, 401.
" "	"	1.818	Schiff. A. C. P. 107, 64.
" "	"	1.886	Schröder. J. P. C. (2), 19, 266.
ium nickel sulphate	$K_2Ni(SO_4)_2$	2.897, m. of 2	Playfair and Joule. M. C. S. 2, 401.
" "	"	3.086	Schröder. Ber. 7, 1117.
" "	$K_2Ni(SO_4)_2.6H_2O$	2.111	Kopp. A. C. P. 36, 1.
" "	"	2.136	
" "	"	1.921	Schröder. J. P. C. (2), 19, 266.
" "	"	1.922	
onium nickel sulphate	$Am_2Ni(SO_4)_2.6H_2O$	1.783	Kopp. A. C. P. 36, 1.
" "	"	1.915	
" "	"	1.921	
ium cobalt sulphate	$K_2Co(SO_4)_2$	3.105	Schröder. Ber. 7, 1118.
" "	$K_2Co(SO_4)_2.6H_2O$	2.154	Schiff. A. C. P. 107, 64.
" "	"	2.205, 16°.8	Pettersson. U. N. A. 1876.
" "	"	2.214, 16°.6	
nium cobalt sulphate	$Am_2Co(SO_4)_2.6H_2O$	1.873	Schiff. A. C. P. 107, 64.
" "	"	1.902, 18°	Pettersson. U. N. A. 1876.
" "	"	1.907, 16°.6	
" "	"	1.893	Schröder. J. P. C. (2), 19, 266.
m cobalt sulphate	$Tl_2Co(SO_4)_2.6H_2O$	3.729, 16°.2	Pettersson. U. N. A. 1876.
" "	"	3.769, 16°	
" "	"	3.803, 16°.4	
m copper sulphate	$K_2Cu(SO_4)_2$	2.797, m. of 2	Playfair and Joule. M. C. S. 2, 401.
" "	"	2.784, 20°.5	Favre and Valson. C. R. 77, 579.
" "	"	2.754	Schröder. Dm. 1873.
" "	"	2.779	
" "	"	2.789	
" "	$K_2Cu(SO_4)_2.6H_2O$	2.244, m. of 2	Playfair and Joule. M. C. S. 2, 401.
" "	"	2.16376, 4°	Playfair and Joule. J. C. S. 1, 138.
" "	"	2.137	Schiff. A. C. P. 107, 64.
" "	"	2.186, 18°.8	Favre and Valson. C. R. 77, 579.
" "	"	2.224	Schröder. Dm. 1870.
" "	"	2.221, 16°	Pettersson. U. N. A. 1876.
[illegible] sulphate	$Am_2Cu(SO_4)_2$	2.197, m. of 2	Playfair and Joule. M. C. S. 2, 401.
	"	2.348	Schröder. J. P. C. (2), 19, 266.

NAME.	FORMULA.	SP. GRAVITY.	AUTH
Ammonium copper sulphate.	$Am_2Cu(SO_4)_2 . 6H_2O$	1.756	Kopp. 86, 1.
" " "	"	1.757	
" " "	"	1.891, m. of 2.	Playfair M. C. S
" " "	"	1.89378, 4°	Playfair J. C. S.
" " "	"	1.931	Schiff. 107, 64.
" " "	"	1.925, 15°.2	Petterssoı 1876.
" " "	"	1.931, 15°.8	
" " "	"	1.870, 22°	Evans.
Magnesium zinc sulphate.	$MgZn(SO_4)_2 . 14H_2O$	1.817	Schiff. 107, 64.
Magnesium cadmium sulphate.	$MgCd(SO_4)_2 . 14H_2O$	1.983	"
Magnesium iron sulphate.	$MgFe(SO_4)_2 . 14H_2O$	1.733	"
Magnesium copper sulphate.	$MgCu(SO_4)_2 . 14_2HO$	1.813	"
Fauserite	$MgMn_2(SO_4)_3 . 15H_2O$	1.88	Breithauı 901.
Zinc iron manganese sulphate. Native.	$Zn\ Fe\ Mn_5\ (S\ O_4)_7 . 28\ H_2\ O.$	2.1627	Iles. A. (
Mendozite	$NaAl(SO_4)_2 . 11H_2O$	1.88	Thomson Min.
Sodium aluminum alum.	$NaAl(SO_4)_2 . 12H_2O$	1.641	Schiff. A.
" " "	"	1.567	Buignet.
" " "	"	1.686, 18°	Pettersso A. 187
" " "	"	1.693, 18°	
" " "	"	1.694. 18°.2	
" " "	"	1.73	Soret. J.(
Potassium aluminum alum.*	$K\ Al\ (S\ O_4)_2$	2.228, m. of 2.	Playfair M. C.
" "	"	2.6846, 15°	Pettersso A. 187
" "	"	2.6905, 15°	
" "	$K\ Al\ (S\ O_4)_2 . 12H_2O$	1.7109	Hassenfr 28, 3.
" "	"	1.753	Dufrenoy
" "	"	1.724	Kopp. A
" "	"	1.725, m. of 4.	Playfair M. C.
" "	"	1.75125, 4°	Playfair J. C. S
" "	"	1.711	Schröder.
" "	"	1.749, 21°	Pettersso A. 187
" "	"	1.758, 21°	
" "	"	1.755, 20°.5	
" "	"	1.753	W. C. S J. P. S
" "	"	1.722	Schiff. 107, 64
" "	"	1.757	Buignet.
" "	"	1.756	Stolba. 9[illegible]

* The [illegible]

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
m aluminum	$K\,Al\,(SO_4)_2 \cdot 12\,H_2O$	1.7546, 0°	Spring. Ber. 15, 1254, and Bei. 6, 648. Also a series in Ber. 17, 408.
" --	" --	1.7542, 10°	
" --	" --	1.7538, 20°	
" --	" --	1.7532, 30°	
" --	" --	1.7526, 40°	
" --	" --	1.7521, 50°	
" --	" --	1.7501, 60°	
" --	" --	1.7474, 70°	
" --	" --	1.7252, 80°	
" --	" --	1.7067, 90°	
" --	" --	1.758, 21°, not pressed.	Spring. Ber. 16, 2724.
" --	" --	1.756, 16°.5, once pressed.	
" --	" --	1.750, 16°.5, twice pressed	
" --	" --	1.735	Soret. C. R. 99, 867.
n aluminum alum	$Rb\,Al\,(SO_4)_2$	2.7832, 14°.8	Pettersson. U. N. A. 1876.
" " --	"	2.7910, 15°	
" " --	$Rb\,Al\,(SO_4)_2 \cdot 12\,H_2O$	1.874	Redtenbacher. S. W. A. 51, 248.
" " --	" --	1.890 } 20°	Pettersson. U. N. A. 1874.
" " --	" --	1.891	
" " --	" --	1.8667, 0°	Spring. Ber. 15, 1254, and Bei. 6, 648. Also a series in Ber. 17, 408.
" " --	" --	1.8648, 10°	
" " --	" --	1.8639, 20°	
" " --	" --	1.8635, 30°	
" " --	" --	1.8631, 40°	
" " --	" --	1.8624, 50°	
" " --	" --	1.8619, 60°	
" " --	" --	1.8611, 70°	
" " --	" --	1.8596, 80°	
" " --	" --	1.8578, 90°	
" " --	" --	1.8554, 100°	
" " --	" --	1.883 } 20.°6	Setterberg. Ber. 15, 1740.
" " --	" --	1.886	
" " --	" --	1.852	Soret. C. R. 99, 867.
luminum alum --	$Cs\,Al\,(SO_4)_2 \cdot 12\,H_2O$	2.003	Redtenbacher. S. W. A. 51, 248.
" " --	" --	1.994, 18°.1	Pettersson. U. N. A. 1874.
" " --	" --	2.000, 20°	
" " --	" --	2.0215, 0°	Spring. Ber. 15, 1254, and Bei. 6, 648. Also a series in Ber. 17, 408.
" " --	" --	2.0210, 10°	
" " --	" --	2.0205, 20°	
" " --	" --	2.0200, 30°	
" " --	" --	3.0194, 40°	
" " --	" --	2.0189, 50°	
" " --	" --	2.0186, 60°	
" " --	" --	2.0173, 70°	
" " --	" --	2.0153, 80°	
" " --	" --	2.0107, 90°	
" " --	" --	2.0061, 100°	
" " --	" --	1.988, 18°, not pressed.	Spring. Ber. 16, 2724.
[illegible] " --	" --	2.000, 20°, once pressed.	
	" --	2.005, 20°, twice pressed	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Ammonium iron alum	$AmFe(SO_4)_2.12H_2O$	1.720, 18°.2	Pettersson. U.N.[illegible] 1874.
" " "	"	1.723, 18°	"
" " "	"	1.725, 17°	"
" " "	"	1.718	Soret. C. R. 99, [illegible]
Thallium iron alum	$TlFe(SO_4)_2.12H_2O$	2.351, 15	Pettersson. U.N.[illegible] 1874.
" " "	"	2.385	Soret. C. R. 99, [illegible]
Potassium gallium alum	$KGa(SO_4)_2.12H_2O$	1.895	Soret. C. R. [illegible] 156.
Rubidium gallium alum	$RbGa(SO_4)_2.12H_2O$	1.962	" "
Ammonium gallium alum	$AmGa(SO_4)_2.12H_2O$	1.745	Soret. C. R. 99, [illegible]
" " "	"	1.776	Soret. C. R. [illegible] 156.
Rubidium indium alum	$RbIn(SO_4)_2.12H_2O$	2.065	" "
Cæsium indium alum	$CsIn(SO_4)_2.12H_2O$	2.241	" "
Ammonium indium alum	$AmIn(SO_4)_2.12H_2O$	2.011	Soret. C. R. 99, [illegible]

Sonomaite	$Mg_3Al_2(SO_4)_6.33H_2O$	1.604	Goldsmith. J. [illegible] 1297.
Rœmerite. (Ferroso-ferric sulphate.)	$Fe_3(SO_4)_4.12H_2O$	2.15—2.18	Grailich. J. 11, [illegible]
Uranyl potassium sulphate	$UO_2K_2(SO_4)_2.2H_2O$	3.363, 19°.1	Schmidt. F. W. [illegible]
Uranyl ammonium sulphate.	$UO_2Am_2(SO_4)_2.2H_2O$	3.0131, 21°.5	" "
Didymium ammonium sulphate.	$AmDi(SO_4)_2$	3.075, 15°	Cleve. U. N. A. [illegible]
" "	"	3.086, 15°	" "
" "	$AmDi(SO_4)_2.4H_2O$	2.575, 15°	" "
Samarium ammonium sulphate.	$AmSm(SO_4)_2$	3.191, 18°	" "
" "	$AmSm(SO_4)_2.4H_2O$	2.674, 18°.4	" "
" "	"	2.6[illegible], 18°.4	" "

3d. Basic and Ammonio-Sulphates.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
[illegible]	[illegible]	[illegible]	Playfair and Jo[illegible] M. C. S. 2, 401.
[illegible]	[illegible]	[illegible]	" "
[illegible]	[illegible]	[illegible]	" "
		[illegible]	Maskelyne. J. [illegible] 901.
[illegible]		[illegible]	
[illegible]	[illegible]	[illegible]	Winkler. Da[illegible] Min., 3d Ap[illegible]
[illegible]*	[illegible]	[illegible]	Magnus. P. A. [illegible] 141.
[illegible]		[illegible]	G. Rose. D[illegible] Min.
[illegible]		[illegible]	Maskelyne. [illegible] 902.

* [illegible]

Name.	Formula.	Sp. Gravity.	Authority.
Potassium chrome alum	$K Cr (S O_4)_2 . 12 H_2 O$	1.848	Kopp. A. C. P. 86, 1.
" " "	"	1.826	Playfair and Joule. M. C. S. 2, 401.
" " "	"	1.85609, 4°	Playfair and Joule. J. C. S. 1, 188.
" " "	"	1.845, 12°	Schiff. A. C. P. 107, 64.
" " "	"	1.839, 21°	Pettersson. U. N. A. 1874.
" " "	"	1.840, 21°	
" " "	"	1.841, 20°.2	
" " "	"	1.849, 21°	
" " "	"	1.807	Schröder. Dm. 1873.
" " "	"	1.808	
" " "	"	1.8278, 0°	Spring. Ber. 15, 1254, and Bei. 6, 648. Also a series in Ber. 17, 408.
" " "	"	1.8273, 10°	
" " "	"	1.8269, 20°	
" " "	"	1.8265, 30°	
" " "	"	1.8260, 40°	
" " "	"	1.8255, 50°	
" " "	"	1.8223, 60°	
" " "	"	1.8044, 70°	
" " "	"	1.7456, 80°	
" " "	"	1.828, 20°, not pressed.	Spring. Ber. 16, 2724.
" " "	"	1.823, 16°.5, once pressed.	
" " "	"	1.817	Soret. C. R. 99, 867.
Rubidium chrome alum	$Rb Cr (S O_4)_2 . 12 H_2 O$	1.967 } 16°.8	Pettersson. U. N. A. 1874.
" " "	"	1.969	
" " "	"	1.946	Soret. C. R. 99, 867.
sium chromium alum	$Cs Cr (S O_4)_2 . 12 H_2 O$	2.043	" "
mmonium chrome alum	$Am Cr (S O_4)_2$	1.9943, 14°.7	Pettersson. U. N. A. 1876.
" " "	$Am Cr (S O_4)_2 . 12 H_2 O$	1.738, 21°	Schrötter. P. A. 53, 513.
" " "	"	1.728, 20°	Pettersson. U. N. A. 1874.
" " "	"	1.719	Soret. C. R. 99, 867.
llium chrome alum	$Tl Cr (S O_4)_2 . 12 H_2 O$	2.392, 15°	Pettersson. U. N. A. 1874.
" " "	"	2.402, 18°	
" " "	"	2.236	Soret. C. R. 99, 867.
assium iron alum	$K Fe (S O_4)_2 . 12 H_2 O$	1.831	Topsoë. C. C. 4, 76.
" " "	"	1.819, 16°.8	Pettersson. U. N. A. 1874.
" " "	"	1.822, 17°.5	
" " "	"	1.831, 17°	
" " "	"	1.806	Soret. C. R. 99, 867.
idium iron alum	$Rb Fe (S O_4)_2 . 12 H_2 O$	1.916	" "
um iron alum	$Cs Fe (S O_4)_2 . 12 H_2 O$	2.061	" "
monium iron alum	$Am Fe (S O_4)_2$	2.54, 16°.8	Pettersson. U. N. A. 1874.
" " "	$Am Fe (SO_4)_2 . 12 H_2 O$	1.712	Kopp. A. C. P. 36, 1.
" " "	"	1.718	Playfair and Joule. M. C. S. 2, 401.
" " "	"	1.719	Topsoë. C. C. 4, 76.
" " "	"	1.700	Schröder. Dm. 1873.

XXIII. SELENITES AND SELENATES.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORI
Hydrogen selenite, or selenious acid.	$H_2 Se O_3$	3.123	Topsoë. C. C
" " "	"	3.0066	Clausnizer. A 196, 265.
Chalcomenite	$Cu Se O_3 . 2 H_2 O$	3.76	Des Cloizeau Damour. B 4, 51.
Mercurous selenite	$3 Hg_2 O . 4 Se O_2$	7.35, 13°.5	Köhler. P. 149.
Hydrogen selenate, or selenic acid. " "	$H_2 Se O_4$	2.524	Mitscherlich. 9, 629.
" " "	"	2.625	
" " "	"	2.627	Fabian. J. 1
Lithium selenate	$Li_2 Se O_4 . H_2 O$	2.439	Topsoë. C. C
" "	"	2.564, 18°	Pettersson. U 1874.
" "	"	2.565, 19°.5	
Sodium selenate	$Na_2 Se O_4$	3.098	Topsoë. B. S. 246.
" "	"	3.209, 17°.2	Pettersson. U 1874.
" "	"	3.217, 17°.6	
" "	$Na_2 Se O_4 . 10 H_2 O$	1.584	Topsoë. C. C
" "	"	1.612, m. of 5.	Pettersson. A. 1874.
" "	"	1.603 } extremes	
" "	"	1.621 } 17°.9–19°	
Potassium selenate	$K_2 Se O_4$	3.050	Topsoë. C. C
" "	"	3.074, 18°	Pettersson. U 1874.
" "	"	3.077, 13°	
" "	"	3.077, 21°	
Sodium potassium selenate	$Na_2 Se O_4 . 3 K_2 Se O_4$	3.0[illegible]5	Topsoë. C. C
Rubidium selenate	$Rb_2 Se O_4$	[illegible] m. of 5.	Pettersson. A. 1874.
" "	"	[illegible] } extremes	
" "	"	[illegible]	
Cæsium selenate	$Cs_2 Se O_4$	4.[illegible]	Pettersson. U 1876.
" "	"	4.34, [illegible]	
[illegible]	[illegible]	[illegible]	Topsoë. B. S 246.
[illegible]	[illegible]	[illegible]	Pettersson. U 1874.
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	Topsoë. C. C
[illegible]	[illegible]	[illegible]	Pettersson. U 1874.
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	Topsoë. C. C
[illegible]	[illegible]	[illegible]	Pettersson. U 1874.
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	Topsoë. C. C
[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]
		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	

Name.	Formula.	Sp. Gravity.	Authority.
a selenate. Cryst.	$Ca\ Se\ O_4$	2.93	Michel. C. R. 106, 878.
"	$Ca\ Se\ O_4 . 2\ H_2\ O$	2.676	Topsoë. C. C. 4, 76.
um selenate. Cryst.	$Sr\ Se\ O_4$	4.23	Michel. C. R. 106, 878.
a selenate	$Ba\ Se\ O_4$	4.67, 22°	Schafarik. J. P. C. 90, 12.
" Cryst.	"	4.75	Michel. C. R. 106, 878.
elenate	$Pb\ Se\ O_4$	6.37, 22°	Schafarik. J. P. C. 90, 12.
"	"	6.22, 18°	Pettersson. U. N. A. 1874.
"	"	6.23, 18°.2	
nese selenate	$Mn\ Se\ O_4 . 2\ H_2\ O$	2.949	Topsoë. B. S. C. 19, 246.
"	"	3.001, 15°.8	Pettersson. U. N. A. 1876.
"	"	3.012, 16°.6	
"	$Mn\ Se\ O_4 . 5\ H_2\ O$	2.334	Topsoë. B. S. C. 19, 246.
"	"	2.386, 16°	Pettersson. U. N. A. 1876.
"	"	2.389, 16°	
lenate	$Fe\ Se\ O_4 . 7\ H_2\ O$	2.073	Topsoë. B. S. C. 19, 246.
selenate	$Ni\ Se\ O_4 . 6\ H_2\ O$	2.314	" "
"	"	2.332, 14°.1	Pettersson. U. N. A. 1876.
"	"	2.335, 13°.8	
"	"	2.339, 13°.8	
selenate	$Co\ Se\ O_4$	4.037, 14°.2	" "
"	$Co\ Se\ O_4 . 5\ H_2\ O$	2.512	Topsoë. C. C. 4, 76.
"	$Co\ Se\ O_4 . 6\ H_2\ O$	2.179	" "
"	"	2.247, 14°.6	Pettersson. U. N. A. 1876.
"	"	2.248, 17°	
"	"	2.258, 15°.8	
"	$Co\ Se\ O_4 . 7\ H_2\ O$	2.135	Topsoë. C. C. 4, 76.
r selenate	$Cu\ Se\ O_4 . 5\ H_2\ O$	2.559	" "
"	"	2.561, 19°.2	Pettersson. U. N. A. 1874.
"	"	2.562, 17°.8	
m selenate	$Y_2\ (Se\ O_4)_3 . 9\ H_2\ O$	2.6770, 18°	Cleve and Hoeglund. B. S. C. 18, 289.
"	"	2.780	Topsoë. Quoted by Pettersson.
"	"	2.661, 12°.8	Pettersson. U. N. A. 1876.
m selenate	$Er_2\ (Se\ O_4)_3 . 8\ H_2\ O$	3.516	Topsoë. Quoted by Pettersson.
"	"	3.501, 13°.8	Pettersson. U. N. A. 1876.
"	"	3.510, 14°	
"	"	3.529, 13°.4	
"	$Er_2\ (Se\ O_4)_3 . 9\ H_2\ O$	3.171	Topsoë. Quoted by Pettersson.
anum selenate	$La_2\ (Se\ O_4)_3 . 6\ H_2\ O$	3.48, 14°.4	Pettersson. U. N. A. 1876.
selenate	$Di_2\ (Se\ O_4)_3$	4.416, 12°.5	Cleve. U. N. A. 1885.
"	"	4.430, 12°.5	
"	"	4.460, 18°	
"	"	4.461, 18°	
	$Di_2\ (Se\ O_4)_3 . 5\ H_2\ O$	3.710, 13°.8	Pettersson. U. N. A. 1876.
	"	3.722, 13°.3	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORIT[Y]
Didymium selenate	$Di_2(SeO_4)_3 . 5H_2O$	3.677, 15°	Cleve. U. N. A
" "	"	3.685, 18°.8	
Samarium selenate	$Sm_2(SeO_4)_3$	4.077, 10°	"
" "	$Sm_2(SeO_4)_3 . 8H_2O$	3.326 } 13°	"
" "	"	3.329	
" "	$Sm_2(SeO_4)_3 . 12H_2O$	3.009 } 10°	"
" "	"	3.010	
Thorium selenate	$Th(SeO_4)_2 . 9H_2O$	3.026	Topsoë. B. 21, 121.
Magnesium potassium selenate.	$MgK_2(SeO_4)_2 . 6H_2O$	2.336	Topsoë. C. C.
Magnesium ammonium selenate.	$MgAm_2(SeO_4)_2 . 6H_2O$	2.035	Topsoë. B. S. 246.
Zinc potassium selenate	$ZnK_2(SeO_4)_2 . 2H_2O$	3.210	Topsoë. C. C.
" " "	$ZnK_2(SeO_4)_2 . 6H_2O$	2.538	"
Zinc ammonium selenate	$ZnAm_2(SeO_4)_2 . 6H_2O$	2.200	"
Cadmium potassium selenate.	$CdK_2(SeO_4)_2 . 2H_2O$	3.376	"
Cadmium ammonium selenate.	$CdAm_2(SeO_4)_2 . 2H_2O$	2.897	"
" " "	$CdAm_2(SeO_4)_2 . 6H_2O$	2.307	"
Manganese potassium selenate.	$MnK_2(SeO_4)_2 . 2H_2O$	3.070	Topsoë. B. S. 246.
Manganese ammonium selenate.	$MnAm_2(SeO_4)_2 . 6H_2O$	2.093	Topsoë. C. C.
Iron ammonium selenate	$FeAm_2(SeO_4)_2 . 6H_2O$	2.160	"
Nickel potassium selenate	$NiK_2(SeO_4)_2 . 6H_2O$	2.539	"
" " "	"	2.580, m. of 5	Pettersson. U. A. 1876.
" " "	"	2.573 } extremes	
" " "	"	2.587 } 16°.4-17°.3	
Nickel ammonium selenate.	$NiAm_2(SeO_4)_2 . 6H_2O$	2.228	Topsoë. C. C.
" " "	"	2.274, 15°.8	Pettersson. U. 1876.
" " "	"	2.279, 16°	
Nickel thallium selenate	$NiTl_2(SeO_4)_2 . 6H_2O$	4.0[illegible], 15°.3	"
Cobalt potassium selenate	$CoK_2(SeO_4)_2 . 6H_2O$	2.514	Topsoë. C. C.
" " "	"	2.531, 18°.8	Pettersson. U. 1876.
" " "	"	2.543, 17°.4	
Cobalt rubidium selenate	$CoRb_2(SeO_4)_2 . 6H_2O$	2.8[illegible], 18°.3	
" " "	"	2.88[illegible], 15°.6	" "
" " "	"	2.844, 18°.6	
Cobalt caesium selenate	$CoCs_2(SeO_4)_2 . 6H_2O$	3.0[illegible], 18°.5	
" " "	"	3.0[illegible], 16°.7	" "
" " "	"	[illegible], 18°.5	
Cobalt ammonium selenate	$CoAm_2(SeO_4)_2 . 6H_2O$	2.2[illegible]	Topsoë. C. C.
" " "	"	2.2[illegible], 18°.8	Pettersson. U. 1876.
" " "	"	2.2[illegible], 17°	
" " "	"	2.248, 15°.8	
Cobalt thallium selenate	$CoTl_2(SeO_4)_2 . 6H_2O$	4.04[illegible], 17°.5	"
" " "	"	4.05[illegible], 18°.5	
Copper potassium selenate	$CuK_2(SeO_4)_2 . 6H_2O$	2.5[illegible]	Topsoë. C[illegible]
" " "	"	2.5[illegible], 17°	Petters[illegible]
" " "	"	2.5[illegible], 17°.4	1876.
Copper ammonium selenate	$CuAm_2(SeO_4)_2 . 6H_2O$	2.2[illegible]	[illegible]
" " "	"	2.234, 17°.2	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Calcium selenate. Cryst.	$Ca\ Se\ O_4$	2.93	Michel. C. R. 106, 878.
" "	$Ca\ Se\ O_4 .\ 2\ H_2\ O$	2.676	Topsoë. C. C. 4, 76.
Strontium selenate. Cryst.	$Sr\ Se\ O_4$	4.23	Michel. C. R. 106, 878.
Barium selenate	$Ba\ Se\ O_4$	4.67, 22°	Schafarik. J. P. C. 90, 12.
" " Cryst.	"	4.75	Michel. C. R. 106, 878.
Lead selenate	$Pb\ Se\ O_4$	6.37, 22°	Schafarik. J. P. C. 90, 12.
" "	"	6.22, 18°	Pettersson. U. N. A. 1874.
" "	"	6.23, 18°.2	
Manganese selenate	$Mn\ Se\ O_4 .\ 2\ H_2\ O$	2.949	Topsoë. B. S. C. 19, 246.
" "	"	3.001, 15°.8	Pettersson. U. N. A. 1876.
" "	"	3.012, 16°.6	
" "	$Mn\ Se\ O_4 .\ 5\ H_2\ O$	2.334	Topsoë. B. S. C. 19, 246.
" "	"	2.386, 16°	Pettersson. U. N. A. 1876.
" "	"	2.389, 16°	
Iron selenate	$Fe\ Se\ O_4 .\ 7\ H_2\ O$	2.073	Topsoë. B. S. C. 19, 246.
Nickel selenate	$Ni\ Se\ O_4 .\ 6\ H_2\ O$	2.314	" "
" "	"	2.332, 14°.1	Pettersson. U. N. A. 1876.
" "	"	2.335, 13°.8	
" "	"	2.339, 13°.8	
Cobalt selenate	$Co\ Se\ O_4$	4.037, 14°.2	" "
" "	$Co\ Se\ O_4 .\ 5\ H_2\ O$	2.512	Topsoë. C. C. 4, 76.
" "	$Co\ Se\ O_4 .\ 6\ H_2\ O$	2.179	" "
" "	"	2.247, 14°.6	Pettersson. U. N. A. 1876.
" "	"	2.248, 17°	
" "	"	2.258, 15°.8	
" "	$Co\ Se\ O_4 .\ 7\ H_2\ O$	2.135	Topsoë. C. C. 4, 76.
Copper selenate	$Cu\ Se\ O_4 .\ 5\ H_2\ O$	2.559	" "
" "	"	2.561, 19°.2	Pettersson. U. N. A. 1874.
" "	"	2.562, 17°.8	
Yttrium selenate	$Y_2\ (Se\ O_4)_3 .\ 9\ H_2\ O$	2.6770, 18°	Cleve and Hoeglund. B. S. C. 18, 289.
" "	"	2.780	Topsoë. Quoted by Pettersson.
" "	"	2.661, 12°.8	Pettersson. U. N. A. 1876.
Erbium selenate	$Er_2\ (Se\ O_4)_3 .\ 8\ H_2\ O$	3.516	Topsoë. Quoted by Pettersson.
" "	"	3.501, 13°.8	Pettersson. U. N. A. 1876.
" "	"	3.510, 14°	
" "	"	3.529, 13°.4	
" "	$Er_2\ (Se\ O_4)_3 .\ 9\ H_2\ O$	3.171	Topsoë. Quoted by Pettersson.
Lanthanum selenate	$La_2\ (Se\ O_4)_3 .\ 6\ H_2\ O$	3.48, 14°.4	Pettersson. U. N. A. 1876.
Didymium selenate	$Di_2\ (Se\ O_4)_3$	4.416, 12°.5	Cleve. U. N. A. 1885.
" "	"	4.430, 12°.5	
" "	"	4.460, 18°	
" "	"	4.461, 18°	
" "	$Di_2\ (Se\ O_4)_3 .\ 5\ H_2\ O$	3.710, 13°.8	Pettersson. U. N. A. 1876.
" "	"	3.722, 13°.3	

XXIV. TELLURATES.

Name.	Formula.	Sp. Gravity.	Authority
Hydrogen tellurate, or telluric acid.	H_2TeO_4	3.425, 18°.8	Clarke. A. (3), 16, 206.
" " "	"	3.440, 19°.2	
" " "	"	3.458, 19°.1	
" " "	$H_2TeO_4 . 2H_2O$	2.340	Oppenheim. 213.
" " "	"	2.9649, 26°.5	Clarke. A. (3), 16, 206.
" " "	"	2.9999, 25°.5	
Ammonium tellurate	Am_2TeO_4	2.986, 24°.5	"
" "	"	3.012, 25°	
" "	"	3.024, 24°.5	
Thallium tellurate	Tl_2TeO_4	6.742, 16°	"
" "	"	6.760, 17°.5	
" "	$2Tl_2TeO_4 . H_2O$	5.687, 22°	"
" "	"	5.712, 20°	
Barium tellurate	$BaTeO_4$	4.5305, 10°	Clarke. A. (3), 14, 286.
" "	"	4.5486, 10°.5	

XXV. CHROMATES.

Name.	Formula.	Sp. Gravity.	Authority
Sodium chromate	Na_2CrO_4	2.7104, 16°.5	Abbot. F. W.
" "	"	[illegible], 12°	
" "	$Na_2CrO_4 . 10H_2O$	[illegible], 30°	" "
Sodium dichromate	$Na_2Cr_2O_7 . 2H_2O$	[illegible], 13°	Stanley. C. N 195.
Potassium chromate	K_2CrO_4	2.612	Thomson.
" "	"	[illegible]	Karsten. Schw 65, 394.
" "	"	2.705	Kopp. A. C. 36, 1.
" "	"	[illegible] m. of 10	Playfair and J M. C. S. 2, 40
" "	"	2.711	Playfair and J
" "	"	[illegible], 4°	J. C. S. 1, 18
" "	"	[illegible], 15°.5	Holker. P. M. 27, 213.
" "	"	[illegible]	Schiff. A. C. P. 64.
" "	"	[illegible]	Stolba. J. P. C 503.
" "	"	[illegible]	Schröder. Dm.
" "	"	[illegible]	
" "	"	[illegible]	
" "	"	[illegible]	
" "	"	[illegible]	Spring. [illegible]
" "	"	[illegible]	
" "	"	[illegible]	

[N]AME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
hromate	$K_2 Cr O_4$	2.7258, 50°	Spring. Ber. 15, 1940.
"	"	2.7227, 60°	
"	"	2.7169, 70°	
"	"	2.7110, 80°	
"	"	2.7102, 90°	
"	"	2.7095, 100°	
lichromate	$K_2 Cr_2 O_7$	2.6027	Karsten. Schw. J. 65, 394.
"	"	2.624	Playfair and Joule. M. C. S. 2, 401.
"	"	2.692, 4°	Playfair and Joule. J. C. S. 1, 137.
"	"	2.689	Schabus. J. 3, 312.
"	"	2.721	Schiff. A. C. P. 107, 64.
"	"	2.6616 } 15°	Stolba. J. P. C. 97, 503.
"	"	2.6806 } 15°	
" Pulv.	"	2.702	Schröder. Ber. 11, 2019.
" After fusion.	"	2.677	
" After fusion.	"	2.751	
"	"	2.694	W. C. Smith. Am. J. P. 53, 145.
n trichromate	$K_2 Cr_3 O_{10}$	2.655, m. of 3	Playfair and Joule. M. C. S. 2, 401.
"	"	3.613	Bothe. J. 2, 272.
"	"	2.676	Schröder. A. C. P. 174, 249.
"	"	2.702	
m chromium chro-	$K_2 Cr_6 O_{19}$. $H_2 O$	2.28, 14°	Tommasi. B. S. C. (2), 17, 396.
ium chromate	$Am_2 Cr O_4$	1.9138 } 12°	Abbot. F. W. C.
"	"	1.9203 } 12°	
"	"	1.860	Schröder. Dm. 1878.
"	"	1.871	
ium dichromate	$Am_2 Cr_2 O_7$	2.367	Schiff. A. C. P. 107, 64.
"	"	2.152	Schröder. Dm. 1878.
"	"	2.153	
"	"	2.1223, 16°	Abbot. F. W. C.
"	"	2.1805, 17°	
romate	$Ag_2 Cr O_4$	5.770	Playfair and Joule. M. C. S. 2, 401.
"	"	5.536	Rettig. A. C. P. 178, 72.
"	"	5.463	Schröder. Dm. 1878.
"	"	5.583	
ichromate	$Ag_2 Cr_2 O_7$	4.662	" "
"	"	4.676	
mmonio-chromate	$Ag_2 Cr O_4$. $4 N H_3$	3.063, m. of 3	Playfair and Joule. M. C. S. 2, 401.
" "	"	2.717	Topsoë. C. C. 4, 76.
ium chromate	$Mg Cr O_4$. $H_2 O$	2.2301 } 17°	Abbot. F. W. C.
"	"	2.2886 } 17°	
"	$Mg Cr O_4$. $7 H_2 O$	1.66, 15°	Kopp. A. C. P. 42, 97.
"	"	1.75, 12°	Bödeker. B. D. Z.
"	"	1.7613, 16°	Abbot. F. W. C.
	$Hg_3 Cr O_6$	7.171, 18°.6	H. Stallo. F. W. C.
	$Sr Cr O_4$	3.353	Schröder. Dm. 1878.

XXIV. TELLURATES.

NAME.	FORMULA.	SP. GRAVITY.	AUTH
Hydrogen tellurate, or telluric acid.	$H_2 Te O_4$	3.425, 18°.8	Clarke. (3), 16
" " "	"	3.440, 19°.2	
" " "	"	3.458, 19°.1	
" " "	$H_2 Te O_4 . 2 H_2 O$	2.340	Oppenhe 213.
" " "	"	2.9649, 26°.5	Clarke. (3), 16
" " "	"	2.9999, 25°.5	
Ammonium tellurate	$Am_2 Te O_4$	2.986, 24°.5	"
" "	"	3.012, 25°	
" "	"	3.024, 24°.5	
Thallium tellurate	$Tl_2 Te O_4$	6.742, 16°	"
" "	"	6.760, 17°.5	
" "	$2 Tl_2 Te O_4 . H_2 O$	5.687, 22°	"
" "	"	5.712, 20°	
Barium tellurate	$Ba Te O_4$	4.5305, 10°	Clarke. (3), 14
" "	"	4.5486, 10°.5	

XXV. CHROMATES.

NAME.	FORMULA.	SP. GRAVITY.	AUTH
Sodium chromate	$Na_2 Cr O_4$	2.7104, 16°.5	Abbot.
" "	"	2.7358, 12°	
" "	$Na_2 Cr O_4 . 10 H_2 O$	1.4828, 20°	"
Sodium dichromate	$Na_2 Cr_2 O_7 . 2 H_2 O$	2.5246, 13°	Stanley. 195.
Potassium chromate	$K_2 Cr O_4$	2.612	Thomson
" "	"	2.6402	Karsten. 65, 394
" "	"	2.705	Kopp. 36, 1.
" "	"	2.682, m. of 10	Playfair M. C.
" "	"	2.711	Playfair J. C. S
" "	"	2.72309, 4°	
" "	"	2.678, 15°.5	Holker. 27, 21
" "	"	2.691	Schiff. A 64.
" "	"	2.7343	Stolba. 508.
" "	"	2.719	Schröder
" "	"	2.722	
" "	"	2.7403, 0°	Spring. 1940.
" "	"	2.7374, 10°	
" "	"	2.7345, 20°	
" "	"	2.7317, 30°	
" "	"	2.7288, 40°	

Name.	Formula.	Sp. Gravity.	Authority.
Potassium chromate	$K_2 Cr O_4$	2.7258, 50°	Spring. Ber. 15, 1940.
" "	"	2.7227, 60°	
" "	"	2.7169, 70°	
" "	"	2.7110, 80°	
" "	"	2.7102, 90°	
" "	"	2.7095, 100°	
Potassium dichromate	$K_2 Cr_2 O_7$	2.6027	Karsten. Schw. J. 65, 394.
" "	"	2.624	Playfair and Joule. M. C. S. 2, 401.
" "	"	2.692, 4°	Playfair and Joule. J. C. S. 1, 137.
" "	"	2.689	Schabus. J. 3, 312.
" "	"	2.721	Schiff. A. C. P. 107, 64.
" "	"	2.6616 15°	Stolba. J. P. C. 97, 503.
" "	"	2.6806 15°	
" " Pulv.	"	2.702	Schröder. Ber. 11, 2019.
" " After fusion.	"	2.677	
" "	"	2.751	
" "	"	2.694	W. C. Smith. Am. J. P. 53, 145.
Potassium trichromate	$K_2 Cr_3 O_{10}$	2.655, m. of 3	Playfair and Joule. M. C. S. 2, 401.
" "	"	3.613	Bothe. J. 2, 272.
" "	"	2.676	Schröder. A. C. P. 174, 249.
" "	"	2.702	
Potassium chromium chromate.	$K_2 Cr_5 O_{13}. H_2 O$	2.28, 14°	Tommasi. B. S. C. (2), 17, 396.
Ammonium chromate	$Am_2 Cr O_4$	1.9138 12°	Abbot. F. W. C.
" "	"	1.9203 12°	
" "	"	1.860	Schröder. Dm. 1873.
" "	"	1.871	
Ammonium dichromate	$Am_2 Cr_2 O_7$	2.367	Schiff. A. C. P. 107, 64.
" "	"	2.152	Schröder. Dm. 1873.
" "	"	2.153	
" "	"	2.1223, 16°	Abbot. F. W. C.
" "	"	2.1805, 17°	
Silver chromate	$Ag_2 Cr O_4$	5.770	Playfair and Joule. M. C. S. 2, 401.
" "	"	5.536	Rettig. A. C. P. 173, 72.
" "	"	5.463	Schröder. Dm. 1873.
" "	"	5.583	
Silver dichromate	$Ag_2 Cr_2 O_7$	4.662	" "
" "	"	4.676	
Silver ammonio-chromate	$Ag_2 Cr O_4. 4 N H_3$	3.063, m. of 3	Playfair and Joule. M. C. S. 2, 401.
" " "	"	2.717	Topsoë. C. C. 4, 76.
Magnesium chromate	$Mg Cr O_4. H_2 O$	2.2301 17°	Abbot. F. W. C.
" "	"	2.2886 17°	
" "	$Mg Cr O_4. 7 H_2 O$	1.66, 15°	Kopp. A. C. P. 42, 97.
" "	"	1.75, 12°	Bödeker. B. D. Z.
" "	"	1.7613, 16°	Abbot. F. W. C.
Mercuric chromate	$Hg_3 Cr O_6$	7.171, 18°.6	H. Stallo. F. W. C.
Strontium chromate	$Sr Cr O_4$	3.353	Schröder. Dm. 1873.

Name.	Formula.	Sp. Gravity.	Authority
Barium chromate	$Ba Cr O_4$	3.90, 11°	Bödeker and ...secke. B. D
" "	"	4.49, 23°	Schafarik. J. 90, 12.
" "	"	4.5044	Schweitzer. Un...sity of Mis... Special pub.,...
" "	"	4.296 }	Schröder. Dm. 1...
" "	"	4.304 }	
" " Cryst.	"	4.60	Bourgeois. C. 39, 123.
Lead chromate	$Pb Cr O_4$	6.004	Mohs. See Böt...
" "	"	5.951	Breithaupt. "
" "	"	5.653	Playfair and J... M. C. S. 2, 4...
" " Artif. cryst.	"	6.118	Manross. J. 5,
" " " "	"	6.29	Bourgeois. B. 47, 884.
" " Native	"	5.965, m. of 8	Schröder. Ber. 2019.
Diplumbic chromate	$Pb_2 Cr O_5$	6.266	Playfair and J... M. C. S. 2, 4...
Phœnicochroite	$Pb_3 Cr_2 O_9$	5.75	Dana's Mineral...
Potassium ammonium chromate.	$K Am Cr O_4$	2.278 }	Schröder. Dm. 1...
"	"	2.290 }	
Potassium calcium chromate.	$K_2Ca(CrO_4)_2 . 2H_2O$	2.499 }	" "
" "	"	2.505 }	
" " "	$K_2Ca_4(CrO_4)_5 . 2H_2O$	2.772 }	" "
" " "	"	2.802 }	
Magnesium potassium chromate.	$K_2 Mg (CrO_4)_2 . H_2O$	2.592 }	" "
"	"	2.608 }	
" "	"	2.5804 } 19°.5	Abbot. F. W.
" "	"	2.5966 }	
Magnesium ammonium chromate.	$Am_2Mg(CrO_4)_2 . 6H_2O$	1.8278, 16° }	" "
"	"	1.8293, 17° }	
" "	"	1.8595, 16° }	
Vauquelinite	$Pb_2 Cu Cr_2 O_9$	5.5—5.78	Dana's Mineral...
Potassium chlorochromate	$K Cr O_3 Cl$	2.466	Playfair and J... M. C. S. 2, 40...
" "	"	2.49702, 4°	Playfair and J... J. C. S. 1, 13...
Sodium chromiodate	$Na Cr I O_6 . H_2 O$	3.21	Berg. C. R. 1514.
Potassium chromiodate	$K Cr I O_6$	3.66	" "
Ammonium chromiodate	$Am Cr I O_6$	3.50	" "

XXVI. MANGANITES, MANGANATES, AND PERMANGANATES.

Name.	Formula.	Sp. Gravity.	Authority.
Barium manganite	Ba Mn O_3	5.85	Rousseau and Saglier. C. R. 98, 141.
Barium manganate	Ba Mn O_4	4.85, 23°	Schafarik. J. P. C. 90, 12.
Potassium permanganate	K Mn O_4	2.709	Kopp. J. 16, 4.
" "	"	2.710	

XXVII. MOLYBDATES.

Name.	Formula.	Sp. Gravity.	Authority.
Ammonium molybdate	Am_2 Mo O_4	2.238	Various samples. Schröder. Ber. 11, 2212.
" "	"	2.261	
" "	"	2.270	
" "	"	2.286	
" "	"	2.295	
" "	18 Mo O_3. 14 N H_3. (O H)$_6$. 18 H_2 O.	2.975	Baerwald. J. C. S. 50, 17.
Strontium molybdate	Sr Mo O_4	4.1348, 21°	F. O. Marsh. F. W. C.
" "	"	4.1554, 20°.5	
Barium molybdate	Ba Mo O_4	4.6483, 19°.5	" "
" "	"	4.6589, 17°.5	
Lead molybdate	Pb Mo O_4	8.11, artificial	Manross. J. 5, 11.
" "	"	6.62 "	Cossa. G. C. I. 16, 824.
" " Wulfenite	"	6.76	Haidinger.
" " "	"	6.95	Smith. J. 8, 963.
Cerium molybdate	Ce_2 (Mo O_4)$_3$	4.56, cryst.	Cossa. G. C. I. 16, 824.
" "	"	4.82, ppt.	
Didymium molybdate	Di_2 (Mo O_4)$_3$	4.75, cryst.	" "
Samarium molybdate	Sm_2 (Mo O_4)$_3$	5.95	Cleve. B. S. C. 43, 162.
Samarium sodium molybdate	Sm Na (Mo O_4)$_2$	5.265	Cleve. U. N. A. 1885.

XXVIII. TUNGSTATES.

Name.	Formula.	Sp. Gravity.	Authorit
Sodium tungstate	Na_2WO_4	4.1743, 20°.5	J. L. Davis. F.
" "	"	4.1833, 18°.5	
" "	$Na_2WO_4 . 2H_2O$	3.2814, 19°	"
" "	"	3.2588, 17°.5	
Sodium metatungstate	$Na_2W_4O_{13} . 10H_2O$	3.8467, 13°	Scheibler. 219.
Sodium polytungstate	$Na_6W_7O_{24}$	5.4983	Scheibler. 216.
" "	$Na_6W_7O_{24} . 16H_2O$	3.987, 14°	"
Sodium tungstoso-tungstate.	$Na_2W_3O_9$*	6.617	Wright. J.
" " "	$Na_2W_4O_{11}$	7.283	Scheibler. 223.
Potassium tungstoso-tungstate.	$K_2W_4O_{12}$*	7.085	Two prepara
" " "	"	7.095	Knorre. J.
" " "	"	7.135	(2), 27, 62.
" " "	$K_2W_5O_{12}$	7.6	Zettnow. J.
" " "	$K_2W_8O_{25}$	6.53	Knorre. J. (2), 27, 92.
Sodium potassium tungstoso-tungstate.	$5K_2W_4O_{12} . 2Na_2W_5O_{15}$	7.112	Knorre. J.
" "		7.121	(2), 27, 62.
Calcium tungstate	$CaWO_4$	6.076, artif.	Manross. J.
" " Scheelite	"	6.04	Karsten. Sch 65, 394.
" " "	"	6.03	Rammelsberg. 752.
" " "	"	6.02	Bernoulli. 783.
Barium tungstate	$BaWO_4$	5.0035, 13°.5	J. L. Davis
" "	"	5.0422, 15°	W. C.
Barium metatungstate	$BaW_4O_{13} . 9H_2O$	4.298, 14°	Scheibler. J. 1
Lead tungstate	$PbWO_4$	8.232, artif.	Manross. J. 5
" "	"	8.238 "	
" "	"	8.1032	Kerndt. J.
" "	"	8.1275	42, 113.
Manganese tungstate	$MnWO_4$	6.7, artif.	Geuther and berg. J. 1
" " Hübnerite.	"	7.14	Breithaupt. Min.
" " "	"	7.177, 24°	Hillebrand. S. (3), 27, 3
Iron tungstate	$FeWO_4$	7.1, artif.	Geuther and berg. J. 1
" " Ferberite	"	7.169	Rammelsberg. 855.
" " "	"	6.801	Breithaupt. Min.
" " Reinite	"	6.640	Lüdecke. J.
Iron manganese tungstate	$2MnWO_4 . 3FeWO_4$	7.0, artif.	Geuther and berg. J. 1

* Philipp (Ber. 15, 506) finds the specific gravity of all the "tungsten bronzes" to v— between 7.2 and 7.3, at 16°—18°.

Name.	Formula.	Sp. Gravity.	Authority.
am*	(Mn Fe) W O_4	7.155	Mohs. See Böttger.
	"	7.097	Gehlen. " "
Fe_2 : Mn	"	7.4581	Sipöcz. Ber. 19, 95.
l tungstate	Ni W O_4	6.8522, 22°	J. L. Davis. F. W. C.
"	"	6.8896, 20°.5	
n tungstate	Ce_2 (W O_4)$_3$	6.514, 12°	Cossa and Zechini. Ber. 18, 1861.
aium tungstate	Di_2 (W O_4)$_3$	6.69, 14°	Cossa. Ber. 14, 107.
ium tungstate	Sm_2 O_3. 12 W O_3. 35 H_2 O.	3.992 18°.4	Cleve. U. N. A. 1885.
"		3.996 18°.4	

XXIX. BORATES.

Name.	Formula.	Sp. Gravity.	Authority.
gen borate, or boric	H_3 B O_3	1.479	Kirwan.
" "	"	1.4347, 15°	Stolba. J. 16, 667.
" "	"	1.493, 20°.5	Favre and Valson. C. R. 77, 579.
" "	"	1.5463, 0°	Ditte. Bei. 2, 67.
" "	"	1.5172, 12°	
" "	"	1.4165, 60°	
" "	"	1.3828, 80°	
n diborate	Na_2 B_4 O_7	2.367	Filhol. Ann. (3), 21, 415.
"	"	2.371, 20°	Favre and Valson. C. R. 77, 579.
"	"	2.368, 16°	Bedson and Williams. Ber. 14, 2553.
"	"	2.370, 14°.2	
"	"	2.373, 18°.5	
"	"	2.5, fused	Quincke. P. A. 135, 642.
"	Na_2 B_4 O_7. 5 H_2 O	1.815	Payen. Q. J. S. 1828 (1), 483.
"	Na_2 B_4 O_7. 10 H_2 O	1.757	Wattson.
"	"	1.728	Hassenfratz. Ann. 28, 3.
"	"	1.716	Mohs. See Böttger.
"	"	1.74	Payen. Q. J. S. 1828 (1), 483.
"	"	1.730, m. of 2	Playfair and Joule. M. C. S. 2, 401.
"	"	1.692	Filhol. Ann. (3), 21, 415.
"	"	1.692	Buignet. J. 14, 15.
"	"	1.7156	Stolba. J. P. C. 97, 503.
"	"	1.711, 20°	Favre and Valson. C. R. 77, 579.
l. "	"	1.736	W. C. Smith. Am. J. P. 53, 148.

Dana's Mineralogy for many other determinations.

NAME.	FORMULA.	SP. GRAVITY.	AUTHOR
Potassium borate	$K_2 B_4 O_7$	1.740	Buignet. J
Pinnoite	$Mg B_2 O_4 . 3 H_2 O$	2.27	Staute. Ber. 1
Magnesium borate	$Mg_3 B_2 O_6$	2.987	Ebelmen. J.
Szaibelyite	$Mg_5 B_4 O_{11} . 3 H_2 O$	3.0	Peters. J. 1
Colemanite	$Ca_2 B_6 O_{11} . 5 H_2 O$	2.428	Evans. J. 3
Priceite	$Ca_3 B_8 O_{15} . 6 H_2 O$	2.262 }	Silliman. A
"	"	2.298 }	(3), 6, 128.
" Pandermite	"	2.48	v. Rath. Min., 3d A
Lead borate	$Pb B_2 O_4$	5.598	Herapath. J
Lead hydrogen borate	$Pb H B_3 O_6$	5.235	"
Jeremerewite	$Al B O_3$	3.28	Damour. J. 44, 719.
Didymium orthoborate	$Di B O_3$	5.680 } 15°	Cleve. U. N.
" "	"	5.721 }	
Didymium borate	$Di_4 B_2 O_9$	5.825, 14°	Nordenskiöl 197.
Samarium orthoborate	$Sm B O_3$	6.045 } 16°.4	{ Cleve. U.
" "	"	6.052 }	{ 1885.
Ulexite	$Na Ca B_5 O_9 . 6 H_2 O$	1.65	How. A. J. 24, 234.
Franklandite	$Na_4 Ca_2 B_{12} O_{..} . 15 H_2 O$.	1.65	Reynolds. 1288.
Hydroboracite	$Mg_3 Ca_3 B_{16} O_{30} . 18 H_2 O$.	1.9	Hess. P. A.
Sussexite	$Mg Mn B_2 O_5 . H_2 O$	3.42	Brush. A. J 46, 240.
Magnesium chromium borate.	$Mg_6 Cr_6 B_4 O_{21}$	3.82	Ebelmen. J
Magnesium iron borate	$Mg_6 Fe_6 B_4 O_{21}$	3.85	"
Ludwigite	$Mg_6 Fe'''_4 Fe''_2 H_2 B_2 O_{20}$	3.907 }	Tschermak.
"		4.016 }	1278.
Rhodizite	$Al_2 K B_2 O_5$	3.38	Damour. J. 3
Boracite	$Mg_7 B_{16} O_{30} Cl_2$	2.9134	Karsten. J.
"	"	2.974	Mohs. See I

XXX. NITRATES.

1st. Simple Nitrates.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORI
Hydrogen nitrate, or nitric acid.	$H N O_3$	1.5545, 15°.5	Kirwan. Gill 9, 266.
" " "	"	1.522, 12°.5	Mitscherlich. 18, 152.
" " "	"	1.5[illegible]	A. Smith. J.
" " "	"	1.552, 15°	Millon. J. P. 337.
" " "	$H N O_3 . H_2 O$	1.48[illegible]	A. Smith. J.
" " "	$H N O_3 . 3 H_2 O$	1.424	"
Nitric subhydrate	$2 H N O_3 . N_2 O_5$	1.642, 18°	Weber. [illegible] 6, [illegible]

Name.	Formula.	Sp. Gravity.	Authority.
itrate	$Li\ N\ O_3$	2.334	Kremers. J. 10, 67.
"	"	2.442	Troost. J. 10, 141.
itrate	$Na\ N\ O_3$	2.0964	Hassenfratz. Ann. 28, 3.
"	"	2.096	Klaproth.
"	"	2.1880	Marx. See Böttger.
"	"	2.2256	Karsten. Schw. J. 65, 394.
"	"	2.200	Kopp. A.C.P. 36, 1.
"	"	2.182, m. of 4	Playfair and Joule. M. C. S. 2, 401.
"	"	2.2606, 4°	Playfair and Joule. J. C. S. 1, 137.
"	"	2.26	Filhol. Ann. (3), 21, 415.
"	"	2.256	Schröder. P. A. 106, 226.
"	"	2.265	Buignet. J. 14, 15.
"	"	2.236	Kopp. J. 16, 4.
"	"	2.246, 15°.5	Holker. P. M. (3), 27, 213.
"	"	2.24 }	Page and Keightley. J. C. S. (2), 10, 566.
	"	2.25 }	
"	"	2.148	W. C. Smith. Am. J. P. 53, 148.
" Native	"	2.18, 15°.5	Forbes. P. M. (4), 32, 135.
" "	"	2.290	Hayes.
"	"	1.878, at the melting p't.	Melts 314°. Braun. P. A. 154, 190.
"	"	2.24	Brügelmann. Ber. 17, 2359.
"	$Na\ N\ O_3.\ 7\ H_2\ O$	1.357, 0°, l.	Ditte. B. S. C. 24, 366.
ium nitrate	$K\ N\ O_3$	1.9369	Hassenfratz. Ann. 28, 3.
"	"	1.933	Wattson.
"	"	2.1006	Karsten. Schw. J. 65, 394.
"	"	2.058	Kopp. A. C. P. 36, 1.
"	"	2.070, m. of 3	Playfair and Joule. M. C. S. 2, 401.
"	"	2.1078 } 4°	Playfair and Joule. J. C. S. 1, 137.
"	"	2.10657 } 4°	
"	"	2.09584 } 4°	
" Large crystals.	"	2.109 }	Grassi. J. 1, 39.
" Small crystals.	"	2.143 }	
" After fusion.	"	2.132 }	
"	"	2.100	Schiff. A. C. P. 112, 88.
"	"	2.086	Schröder. P. A. 106, 226.
	"	2.126	Buignet. J. 14, 15.
	"	2.105	Kopp. J. 16, 4.

Name.	Formula.	Sp. Gravity.	Author
Potassium nitrate	$K\,N\,O_3$	2.074, 15°.5	Holker. P. 27, 213.
" "	"	2.0845	Stolba. J. 1 503.
" "	"	2.0904	
" "	"	2.059, 0°	Quincke. P. 642.
" "	"	2.06	Page and Ke J. C. S. (2),
" "	"	2.10855, cryst. at 20°.	Nicol. P. 15, 94.
" "	"	2.09916, cryst. at 110°.	
" "	"	1.702, at the melting p't.	Braun. (M 842°.) P. 190.
Ammonium nitrate	$Am\,N\,O_3$	1.579	Hassenfratz. 28, 3.
" "	"	1.707	Kopp. A. C.
" "	"	1.635, m. of 3	Playfair and M. C. S. 2
" "	"	1.737, m. of 2	Schröder. P. 226.
" "	"	1.709	Schiff. A. C. 88.
" "	"	1.723	Buignet. J.
" "	"	1.6915	Stolba. J. F 503.
Silver nitrate	$Ag\,N\,O_3$	4.3554	Karsten. S 65, 394.
" "	"	4.336	Playfair and M. C. S. 2,
" "	"	4.238	Schröder. P. 113.
" "	"	4.253	
" "	"	4.271	
" "	"	4.328	
Thallium nitrate	$Tl\,N\,O_3$	5.8	Lamy. J. 1
" "	"	5.55	Lamy and De zeaux. Na 116.
Magnesium nitrate	$Mg\,(N\,O_3)_2.\ 6\,H_2\,O$	1.464	Playfair and M. C. S. 2,
Zinc nitrate	$Zn\,(N\,O_3)_2.\ 6\,H_2\,O$	2.063, 13°	Laws. F. W
" "	"	2.067, 15°	
Cadmium nitrate	$Cd\,(N\,O_3)_2.\ 4\,H_2\,O$	2.450, 14°	"
" "	"	2.460, 20°	
Mercurous nitrate	$Hg\,N\,O_3.\ H_2\,O$	4.785, m. of 3	Playfair and M. C. S. 2,
Calcium nitrate	$Ca\,(N\,O_3)_2$	2.240	Filhol. Ann. 21, 415.
" "	"	2.472	Kremers. J.
" "	"	2.504, 17°.9	Favre and V C. R. 77, 5
" "	$Ca\,(N\,O_3)_2.\ 4\,H_2\,O$	1.78	Filhol. Ann. (415.
" "	"	1.[illegible], 15°.5, s.	Ordway. J.
" "	"	1.7[illegible], 15°.5, l.	
" "	"	1.878, 18°	Fav

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
m nitrate	$Sr(NO_3)_2$	3.0061	Hassenfratz. Ann. 28, 3.
"	"	2.8901	Karsten. Schw. J. 65, 394.
"	"	2.704	Playfair and Joule. M. C. S. 2, 401.
"	"	2.857	Filhol. Ann. (3), 21, 415.
"	"	2.962, m. of 4	Schröder. P. A. 106, 226.
"	"	2.805	Buignet. J. 14, 15.
"	"	2.980, 16°.8	Favre and Valson. C. R. 77, 579.
"	$Sr(NO_3)_2 . 4H_2O$	2.113	Filhol. Ann. (3), 21, 415.
"	"	2.249, 15°.5	Favre and Valson. C. R. 77, 579.
nitrate	$Ba(NO_3)_2$	2.9149	Hassenfratz. Ann. 28, 3.
"	"	3.1848	Karsten. Schw. J. 65, 394.
"	"	3.284, m. of 5	Playfair and Joule. M. C. S. 2, 401.
"	"	3.16052, 4°	Playfair and Joule. J. C. S. 1, 137.
"	"	3.200	Filhol. Ann. (3), 21, 415.
"	"	3.222 } 3.228 }	Crystallized at different temperatures. Kremers. J. 5, 15.
"	"	3.240 } 3.242 }	
"	"	3.208 } 3.241 }	Schröder. P. A. 106, 226.
"	"	3.404	Buignet. J. 14, 15.
"	"	3.22	Brügelmann. Ber. 17, 2359.
trate	$Pb(NO_3)_2$	4.068	Hassenfratz. Ann. 28, 3.
"	"	4.769	Breithaupt. Schw. J. 68, 291.
"	"	4.3993	Karsten. Schw. J. 65, 394.
"	"	4.340	Kopp.
"	"	4.316, m. of 3	Playfair and Joule. M. C. S. 2, 401.
"	"	4.472, 4°	Playfair and Joule. J. C. S. 1, 137.
"	"	4.581	Filhol. Ann. (3). 21, 415.
"	"	4.41, 15°.5	Holker. P. M. (3), 27, 214.
"	"	4.423 } 4.429 } 4.509 }	Schröder. P. A. 106, 226.
"	"	4.235	Buignet. J. 14, 15.
"	"	4.3, 0°	Ditte. Ber. 15, 1438.
	$Mn(NO_3)_2 . 6H_2O$	1.8199, 21°, s.	Ordway. J. 12, 113.
	"	1.8104, 21°, l.	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Nickel nitrate	$Ni(NO_3)_2 . 6H_2O$	2.037, 22°	Laws. F. W. C.
" "	"	2.065, 14°	
Cobalt nitrate	$Co(NO_3)_2 . 6H_2O$	1.83, 14°	Bödeker. B. D.
Copper nitrate	$Cu(NO_3)_2 . 3H_2O$	2.174	Hassenfratz. An 28, 8.
" "	"	2.047, m. of 3.	Playfair and Jou M. C. S. 2, 401.
Didymium nitrate	$Di(NO_3)_3 . 6H_2O$	2.245 } 19°	Cleve. U. N. A. 188
" "	"	2.253 } 19°	
Samarium nitrate	$Sm(NO_3)_3 . 6H_2O$	2.370 } 20°.4	" "
" "	"	2.380 } 20°.4	
Ferric nitrate	$Fe_2(NO_3)_6 . 18H_2O$	1.6835, 21°, s.	Ordway. J. 12, 114.
" "	"	1.6712, l.	
Bismuth nitrate	$Bi(NO_3)_3 . 5H_2O$	2.736, m. of 2.	Playfair and Jou M. C. S. 2, 401.
" "	"	2.828, 18°	Laws. F. W. C.
Uranyl nitrate	$UO_2(NO_3)_2 . 6H_2O$	2.807, 18°	Bödeker. B. D.
Gold hydrogen nitrate	$AuH(NO_3)_4 . 3H_2O$	2.82 } 19°	Gumpach. Se Schottlande Wurzburg In Diss. 1884.
" " "	"	2.87 } 19°	

2d. Basic and Ammonio-Nitrates.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Dimercuric nitrate	$Hg_2N_2O_7 . 2H_2O$	4.242	Playfair and Joul M. C. S. 2, 401.
Mercurous subnitrate	$Hg_6(NO_3)_4O . 3H_2O$	5.967	" "
Lead hydroxynitrate	$PbNO_3OH$	5.93, 0°	Ditte. Ber. 15, 14
Diplumbic nitrate	$Pb_2N_2O_7$	5.645	Playfair and Joul M. C. S. 2, 401.
Tricupric nitrate	$Cu_3N_2O_8 . H_2O$	2.765, m. of 3.	" "
Tetracupric nitrate	$Cu_4N_2O_9 . 3H_2O$	3.378	Wells and Penfiel A. J. S. (3), 30,
" "	"	3.371	
Gerhardtite	"	3.426	
Bismuth subnitrate	$Bi_2N_2O_8 . H_2O$	4.551	Playfair and Jou M. C. S. 2, 401.
Bismuth hydroxynitrate	$Bi(OH)_2NO_3$	5.260, m. of 2.	" "
Mercury ammonionitrate	$Hg_3N_2O_8 . 2NH_3$	5.970	" "
Copper ammonionitrate	$Cu(NO_3)_2 . 4NH_3$	1.874, m. of 3.	" "
" "	"	1.905, 21°.5	Evans. F. W. C.
Purpureocobalt chloronitrate.	$Co_2(NH_3)_{10}Cl_2(NO_3)_4$	1.667, 16°	Jörgensen. J. P. C (2), 20, 105.
Purpureocobalt bromonitrate.	$Co_2(NH_3)_{10}Br_2(NO_3)_4$	1.956, 17°.1	Jörgensen. J. P. C (2), 19, 49.
Purpureochromium chloronitrate.	$Cr_2(NH_3)_{10}Cl_2(NO_3)_4$	1.569, 17°.2	Jörgensen. J. P. C (2), 20, 105.

XXXI. HYPOPHOSPHITES AND PHOSPHITES.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Hydrogen hypophosphite, or hypophosphorous acid	$H_3 P O_2$	1.493, 18°.8	Thomsen. J. P. C. (2), 2, 160.
Barium hypophosphite	$Ba H_4 P_2 O_4 . H_2 O$	2.8718, 10°	Mohr. F. W. C.
" "	"	2.8971, 17°	
" "	"	2.889	Schröder. Ber. 11, 2180.
" "	"	2.911	
" "	"	2.775, 23°.8	Nye. F. W. C.
" "	"	2.780, 21°.6	
Magnesium hypophosphite	$Mg H_4 P_2 O_4 . 6 H_2 O$	1.5681, 14°.5	Mohr. F. W. C.
" "	"	1.5886, 12°.5	
Zinc hypophosphite	$Zn H_4 P_2 O_4 . 6 H_2 O$	2.014, 19°.5	Nye. F. W. C.
" "	"	2.016, 19°.2	
" "	"	2.020, 20°	
Nickel hypophosphite	$Ni H_4 P_2 O_4 . 6 H_2 O$	1.824, 19°.8	" "
" "	"	1.844, 19°	
" "	"	1.856, 18°	
Cobalt hypophosphite	$Co H_4 P_2 O_4 . 6 H_2 O$	1.808, 18°.5	" "
" "	"	1.809, 18°.5	
" "	"	1.811, 18°.5	
Hydrogen phosphite, or phosphorous acid.	$H_3 P O_3$	1.651, 21°.2	Thomsen. J. P. C. (2), 2, 160.

XXXII. HYPOPHOSPHATES.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Tetrasodium hypophosphate.	$Na_4 P_2 O_6 . 10 H_2 O$	1.832	Dufet. C. R. 102, 1328.
" "	"	1.8233	Dufet. B. S. M. 10, 77.
Trisodium hypophosphate	$Na_3 H P_2 O_6 . 9 H_2 O$	1.7427	" "
Disodium hypophosphate	$Na_2 H_2 P_2 O_6 . 6 H_2 O$	1.8491	" "
" "	"	1.840	Dufet. C. R. 102, 1328.

XXXIII. PHOSPHATES.

1st. Normal Orthophosphates.

Name.	Formula.	Sp. Gravity.	Author
Hydrogen phosphate, or phosphoric acid.	H_3PO_4	1.88	Schiff. J. :
" "	"	1.884, 18°.2	Thomsen. (2), 2, 16(
Trisodium phosphate	Na_3PO_4	2.5111, 12°	C. A. Mohr. C.
" "	"	2.5362, 17°.5	
" "	$Na_3PO_4 . 12H_2O$	1.622	Playfair an M. C. S. :
" "	"	1.618	Schiff. A. C 88.
" "	"	1.6645	Dufet. B. S 77.
Disodium hydrogen phosphate.	$Na_2HPO_4 . 3H_2O$	1.848	Dufet. C. 1328.
" " "	$Na_2HPO_4 . 7H_2O$	1.6789	Dufet. B. S 77.
" " "	$Na_2HPO_4 . 12H_2O$	1.5139	Tünnerman Böttger.
" " "	"	1.525, m. of 3	Playfair an M. C. S. :
" " "	"	1.586, 8°	Kopp. J. 8
" " "	"	1.525	Schiff. A. C 88.
" " "	"	1.550	Buignet. J
" " "	"	1.5235, 15°	Stolba. J. 97. 503.
" " "	"	1.535	W. C. Smit J. P. 53,
" " "	"	[illegible]	Dufet. B. : 77.
Sodium dihydrogen phosphate	$NaH_2PO_4 . H_2O$	2.040	Schiff. A. C 88.
" " "	"	2.0547	Dufet. B. S 77.
" " "	$NaH_2PO_4 . 2H_2O$	[illegible]	Joly and Du R. 102. 18
" " "	"	[illegible]	Dufet. B. S 77.
Potassium dihydrogen phosphate	KH_2PO_4	2.298	Schiff. A. 112. 88.
" " "	"	[illegible]	Buignet. J
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	Schröder. D
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	
Diammonium hydrogen phosphate	[illegible]	[illegible]	Schiff. A. 112, 88.
"		[illegible]	Buignet. J
Ammonium dihydrogen phosphate	[illegible]	[illegible]	Schiff. A. 112 88.
"		[illegible]	Sch

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
um dihydrogen ıate.	$Am\,H_2\,P\,O_4$	1.779	Schröder. Ber. 7, 677.
potassium hydro- hosphate.	$Na\,K\,H\,P\,O_4.\ 7\,H_2O$	1.671	Schiff. A. C. P. 112, 88.
ammonium hy- ı phosphate.	$Na\,Am\,HPO_4.\ 4\,H_2O$	1.554	" "
· phosphate	$Ag_3\,P\,O_4$	7.821	Stromeyer. See Böttger.
n dihydrogen hate.	$Tl\,H_2\,P\,O_4$	4.723	Lamy and Des Cloizeaux. Nature 1, 116.
um phosphate	$Tl_3\,P\,O_4$	6.89, 10°	Lamy. J. 18, 247.
te	$Mg_3\,(P\,O_4)_2.\ 8\,H_2\,O$	2.41	Lacroix. C. R. 106, 632.
um hydrogen ıate.	$Mg\,H\,P\,O_4.\ H_2\,O$	2.326, 15°	Schulten. C. R. 100, 877.
	$Am\,Mg\,P\,O_4.\ 6\,H_2\,O$	1.65	Teschemacher. P. M. (3), 28, 548.
te	$Am_2\,Mg_3\,H_4\,(P\,O_4)_4.\ 8\,H_2\,O.$	1.893	v. Rath. B. S. M. 2, 80.
	$Zn_3\,(P\,O_4)_2.\ 4\,H_2\,O$	2.76—2.85	Dana's Mineralogy.
	$Ca\,H\,P\,O_4.\ 2\,H_2\,O$	2.208	Moore. A. J. S. (2), 39, 43.
shite	$2\,Ca\,H\,P\,O_4.\ 3\,H_2\,O$	2.288, 15°.5	Julien. A. J. S. (2), 40, 371.
	"	2.356, 15°.5	"
	"	2.362, 15°.5	"
e	$Ca_{10}\,H_4\,(P\,O_4)_8.\ H_2\,O$	2.892—2.896	Kloos. J. C. S. 54, 233.
ite	$Mn_3\,(P\,O_4)_2.\ 3\,H_2\,O$	3.102	Brush and Dana. A. J. S. (3), 16, 120.
e	$Fe_3\,(P\,O_4)_2.\ 8\,H_2\,O$	2.58, 15°	Rammelsberg. P. A. 64, 411.
	"	2.680	Rammelsberg. J. P. C. 86, 344.
ıilite	$Mn\,Li\,P\,O_4$	3.482	Brush and Dana. A. J. S. (3), 18, 45.
te	$Fe\,Li\,P\,O_4$	3.6	Fuchs. B. J. 15, 211.
	"	3.534—3.589	Penfield. A. J. S. (3), 17, 226.
ite	$Mn_{10}\,Fe_2\,H_3\,(P\,O_4)_5.\ 5\,H_2\,O.$	3.185—3.198	Des Cloizeaux. Ann. (3), 53, 300.
ite	$MnCa_2(PO_4)_2.\ 2H_2O.$	3.15	Brush and Dana. A. J. S. (3), 17, 359.
nite	$NaCaFeMn_2(PO_4)_3.\ H_2\,O.$	3.338	Brush and Dana. A. J. S. (3), 16, 114.
		3.343	"
	$Na_2CaFeMn_6(PO_4)_6.\ H_2\,O.$	3.43	Brush and Dana. A. J. S. (3), 17, 363.
	$Fe'''\,P\,O_4.\ 2\,H_2\,O$	2.87	Nies. Z. K. M. 1, 94.
Artificial	"	2.74	Schulten. Z. K. M. 12, 640.
ite	$Fe'''\,P\,O_4.\ 3\,H_2\,O$	2.3	Cesaro. A. J. S. (3), 29, 342.
m phosphate.	$Al\,P\,O_4$	2.59	Schulten. C. R. 98, 1584.
	$4\,Al\,P\,O_4.\ H_2\,O$	2.64	Blomstrand. Dana's Min.
r)	$2\,Al\,P\,O_4.\ 5\,H_2\,O$	2.50	Damour. C. R. 59, 936.
	"	2.52	"

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY
Variscite	$Al PO_4 . 2 H_2O$	2.408, 18°	Petersen. N. J. 357.
Zepharovichite	$Al PO_4 . 3 H_2O$	2.384	Boricky. J. 22,
Xenotime	$Y PO_4$	4.54	Smith. J. 7, 8
"	"	4.45	Zchau. J. 8, 9
"	"	4.51	
"	"	4.39	Damour. J. 10,
Cerium phosphate	$Ce PO_4$	5.22, 14°	Grandeau. Ann 8, 193.
Cryptolite	"	4.6	Wöhler. P. A 424.
"	"	4.78	Watts. J. 2, 7
Rhabdophane (Scovillite)	$2 (La Di Y Er) PO_4 . H_2O$.	3.9—4.01	Brush and Penf A. J. S. (3), 25,
Monazite	$(Ce La Di) PO_4$	5.203	Genth. Dana's
"	"	5.174	Rammelsberg. J 1298.
"	"	5.106—5.110	Kokscharow. J 762.
"	"	5.174	Rammelsberg. G. S. 29, 79.
Didymium phosphate	$Di PO_4$	5.34, 15°	Grandeau. Ann 8, 193.
Samarium phosphate	$Sm PO_4$	5.826 17°.5	Cleve. U. N. 1885.
" "	"	5.830 17°.5	
Autunite	$Ca (UO_2)_2 (PO_4)_2 . 8 H_2O$.	3.05—3.19	Dana's Mineral
Torbernite	$Cu (UO_2)_2 (PO_4)_2 . 8 H_2O$.	3.4—3.6	" "
Uranocircite	$Ba (UO_2)_2 (PO_4)_2 . 8 H_2O$.	3.53	Weisbach. J. 1303.
Sodium zirconium phosphate.	$Na_8 Zr (PO_4)_4$	2.43, 14°	Troost and Ouvr C. R. 105, 30.
" " "	$Na_{12} Zr_3 (PO_4)_8$	2.88, 14°	" "
" " "	$Na Zr_2 (PO_4)_3$	3.10, 12°	" "
Potassium zirconium phosphate.	$K_2 Zr (PO_4)_2$	3.076, 7°	Troost and Ouvr C. R. 102, 142
" "	$K Zr_2 (PO_4)_3$	3.18, 12°	" "
Sodium thorium phosphate.	$Na_3 Th (PO_4)_3$	3.843, 7°	Troost and Ouvr C. R. 105, 30.
" " "	$Na Th_2 (PO_4)_3$	5.62, 16°	" "
Potassium thorium phosphate.	$K_{12} Th_3 (PO_4)_8$	3.95, 12°	Troost and Ouvr C. R. 102, 142
" " "	$K_2 Th (PO_4)_2$	4.688, 7°	" "
" " "	$K Th_2 (PO_4)_3$	5.75, 12°	" "

2d. Basic Orthophosphates.

ME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
------------	$Ca_2(OH)PO_4 . 2H_2O$	2.92	Sandberger. J. P. C. (2), 2, 125.
------------	$Cu_2(OH)PO_4$	3.6—3.8	Hermann. J. P. C. 37, 175.
------------	$Cu_2(OH)PO_4 . H_2O$	3.50	Hermann. J. P. C. 37, 184.
------------	"	4.076	Breithaupt. B. H. Ztg. 24, 309.
------------	$Cu_2(OH)PO_4 . 2H_2O$	3.531	Schrauf. Z. K. M. 4, 31.
hite --------	$Cu_3(OH)_3PO_4$	4.175	Schrauf. Z. K. M. 4, 14.
------------	$Cu_5(OH)_4(PO_4)_2 . H_2O$	4.102	Schrauf. Z. K. M. 4, 13.
------------	$Cu_5(OH)_4(PO_4)_2$	4.309	Schrauf. Z. K. M. 4, 12.
------------	$(MnFe)_2(OH)PO_4$	3.697	Brush and Dana. A. J. S. (3), 16, 42.
------------	$Fe_7(OH)_2(PO_4)_4 . 8H_2O$	3.12	Maskelyne and Field. J. 30, 1300.
------------	$Fe_{14}(OH)_{18}(PO_4)_8 . 27H_2O$	2.83	Streng. J. 34, 1377.
------------	$Fe'''_2(OH)_3PO_4$	3.227	Dufrenoy. Dana's Min.
------------	"	3.382	Campbell. A. J. S. (3), 22, 65.
------------	"	3.454	Massie. J. 33, 1433.
------------	"	3.293	Boricky. S. W. A. 56 (1), 7.
------------	$Fe'''_4(OH)_6(PO_4)_2 . 9H_2O$	3.38	Dana's Mineralogy.
------------	$Fe'''_3Ca_3(OH)_3(PO_4)_4 . 8H_2O$	2.523	Reissig. Dana's Min.
------------		2.529	
------------	$Fe'''_6Ca(OH)_{11}(PO_4)_2 . 3H_2O$	2.696—2.707	Boricky. J. 20, 1002.
e ------------	$Fe'''_6Cu(OH)_8(PO_4)_4 . 4H_2O$	3.108	Maskelyne. J. C. S. 28, 586.
------------	$Fe'''_8CuFe''_4(PO_4)_8(OH)_6$	3.475	" "
------------	$Al_3(OH)_6PO_4 . 6H_2O$	1.939	Forbes. P. M. (4), 28, 341.
------------	$Al_4(OH)_3(PO_4)_3$	3.10	Blomstrand. Dana's Min.
------------	$Al_4(OH)_6(PO_4)_2$	2.77	" "
------------	$Al_4(OH)_6(PO_4)_2 . H_2O$	2.621	Hermann. J. P. C. 33, 282.
------------	"	2.426—2.651	Blake. J. 11, 722.
------------	$Al_4(OH)_6(PO_4)_2 . 3H_2O$	2.492—2.496	Breithaupt. Schw. J. 60, 308.
------------	$Al_4(OH)_6(PO_4)_2 . 5H_2O$	2.46	Hermann. J. P. C. 33, 286.
	$Al_6(OH)_6(PO_4)_4 . 7H_2O$	2.552, 19°	Petersen. N. J. 1871, 353.
		2.593, 18°	

Name.	Formula.	Sp. Gravity.	Authority.
Wavellite	$Al_6 (OH)_6 (PO_4)_4 \cdot 9 H_2O$.	2.337	Haidinger. Min.
"	"	2.316	Richardson. Min.
Planerite	$Al_6 (OH)_6 (PO_4)_4 \cdot 12 H_2O$.	2.65	Hermann. 764.
Sphærite	$Al_{10} (OH)_{18} (PO_4)_4 \cdot 7 H_2O$.	2.536	Zepharovich. A. 56, 24.
Lazulite	$Al_2 Mg (OH)_2 (PO_4)_2$	3.122	Smith and J. 6, 340.
"	"	3.106—3.123	Rammelsberg. A. 64, 261.
"	"	3.108	Chapman. 1083.
Cirrolite	$Al_2 Ca_3 (OH)_3 (PO_4)_3$	3.08	Blomstrand. Min.
Plumbogummite	$Al_4 Pb (OH)_8 (PO_4)_2 \cdot 5 H_2O$.	4.88, 15°.6	Dufrenoy. (2), 59, 440.
" Hitchcockite	"	4.014, 20°	Genth. A.J. 23, 424.
Eosphorite	$Al Mn (OH)_2 PO_4 \cdot H_2O$.	3.124	Brush and A. J. S. (3),
"		3.134	"
"	"	3.145	"
Childrenite	$Al Fe (OH)_2 PO_4 \cdot H_2O$.	3.22	Church. J. C. 104.
Barrandite	$Al Fe''' (PO_4)_2 \cdot 4 H_2O$.	2.576	Zepharovich. 1000.

3d. Meta- and Pyrophosphates.

Name.	Formula.	Sp. Gravity.	Authority.
Sodium metaphosphate	$Na PO_3$	2.4756, 19°.5	Mohr. F.W.
" "	"	2.4769, 18°	"
" "	"	2.503, 20°	Bedson and liams. Be 2555.
Potassium metaphosphate	$K PO_3$	2.2513, 14°.5	Mohr. F.W.
" "	"	2.2639, 14°.5	"
Didymium metaphosphate	$Di P_5 O_{14}$	3.333, 18°.4	Cleve. U.N.
" "	"	3.358, 18°.4	"
Samarium metaphosphate	$Sm P_5 O_{14}$	3.485, 28°.8	"
" "	"	3.489, 28°.8	"
Thorium metaphosphate	$Th P_4 O_{12}$	4.08, 16°.4	Troost. C. 210.
Sodium pyrophosphate	$Na_4 P_2 O_7$	2.534	Schröder. Di
" "	"	2.3613, 17°	Mohr. F.W
" "	"	2.3851, 17°	"
" "	$Na_4 P_2 O_7 \cdot 10 H_2O$	1.836	Playfair and M. C. S. 2
" "	"	1.7726, 21°	Mohr. F.W

Name.	Formula.	Sp. Gravity.	Authority.
pyrophosphate	$Na_4 P_2 O_7 . 10 H_2 O$	1.824	Dufet. C. R. 102, 1328.
"	"	1.8151	Dufet. B. S. M. 10, 77.
hydrogen pyro-hate.	$Na_2 H_2 P_2 O_7 . 6 H_2 O$	1.8616	" "
m pyrophosphate	$K_4 P_2 O_7$	2.33	Brügelmann. Ber. 17, 2359.
yrophosphate	$Ag_4 P_2 O_7$	5.306	Stromeyer. See Böttger.
"	"	5.2596	Tünnermann. See Böttger.
m pyrophosphate	$Tl_4 P_2 O_7$	6.786	Lamy and Des Cloizeaux. Nature 1, 116.
ium pyrophosphate	$Mg_2 P_2 O_7$	2.220	Schröder. Dm. 1878.
"	"	2.559, 18°	Lewis. F. W. C.
"	"	2.598, 22°	Lewis. F. W. C.
rophosphate	$Zn_2 P_2 O_7$	3.7538, 23°	" "
"	"	3.7574, 23°	" "
ese pyrophosphate	$Mn_2 P_2 O_7$	3.5742, 26°	" "
"	"	3.5847, 20°	" "
pyrophosphate	$Ni_2 P_2 O_7$	3.9064, 27°	" "
"	"	3.9308, 25°	" "
pyrophosphate	$Co_2 P_2 O_7$	3.710, 25°	" "
"	"	3.746, 23°	" "
pyrophosphate	$Ba_2 P_2 O_7 . H_2 O$	3.574	Schröder. Dm. 1878.
"	"	3.582	Schröder. Dm. 1878.
"	"	3.590	Schröder. Dm. 1878.
pyrophosphate	$Si P_2 O_7$	3.1, 14°	Hautefeuille and Margottet. C. R. 96, 1053.
m pyrophosphate	$Zr P_2 O_7$	3.12	Knop. A. C. P. 159, 48.
"	"	3.14	Knop. A. C. P. 159, 48.
phosphate	$Sn P_2 O_7$	3.61	Knop. A. C. P. 159, 89.
pyrophosphate	$Sn_2 (P_2 O_7) O_2$	3.87	" "
"	"	3.98	" "
nium pyrophos-	$Ti_3 (P_2 O_7) O_4$	2.9	Knop. A. C. P. 157, 365.

XXXIV. VANADATES.

Name.	Formula.	Sp. Gravity.	Authorit[y]
Sodium octovanadate	$Na_{12} V_8 O_{26}$. 4 H_2O	2.85, 18°	Carnelley. J. (2), 11, 323.
Silver octovanadate	$Ag_{12} V_8 O_{26}$	5.67, 18°	"
Thallium metavanadate	$Tl V O_3$	6.019, 11°	"
Thallium pyrovanadate	$Tl_4 V_2 O_7$	8.21, 18°.5, ppt.	"
" "	"	8.812, 18°.5, fused.	
Thallium orthovanadate	$Tl_3 V O_4$	8.6, 17°	"
Thallium octovanadate	$Tl_{12} V_8 O_{26}$	8.59, 17°.5	"
Thallium decavanadate	$Tl_{12} V_{10} O_{31}$	7.86, 17°	"
Magnesium vanadate. Brown.	$Mg_3 V_{10} O_{28}$. 28 H_2O	2.199, 18°	Sugiura and B[aker]. J. C. S. 35, [illegible]
" " Red	"	2.167, 18°	
Pucherite	$Bi V O_4$	5.91	Frenzel. J. [illegible] (2), 4, 227.
Dechenite	$Pb_3 V_2 O_8$. $Zn_3 V_2 O_8$	5.81	Bergemann. [illegible] 753.
"	"	5.83	Tschermak. [illegible] 1021.
" Eusynchite	"	5.596	Rammelsberg.
Descloizite	Pb Zn (O H) $V O_4$	5.839	Damour. J. [illegible]
"	"	5.915	From two sa[mples] Rammelsbe[rg] 33, 1428.
"	"	6.080	
"	"	6.200	Penfield.* A[m. J.] (3), 26, 361.
"	"	6.205	
" Light	"	6.105—6.108	Genth. Am. [Phil.] Soc. 1885.
" Dark	"	5.814—5.882	
Mottramite†	Pb Cu (O H) $V O_4$	5.894	Roscoe. J. 29,
Volborthite‡	$R_3(OH)_3VO_4$. 6 H_2O	3.55	Credner. Da[na's] Min.
Didymium vanadate	$Di V O_4$	4.959, 21°.2	Cleve. U.N.A
" "	"	4.963, 21°.2	
Didymium metavanadate	$Di V_5 O_{14}$. 14 H_2O	2.492, 18°.5	"
" "	"	2.497, 18°.5	
Samarium metavanadate	$Sm V_5 O_{14}$. 12 H_2O	2.628, 17°.5	"
" "	"	2.620, 17°.8	
" "	$Sm V_5 O_{14}$. 14 H_2O	2.52[illegible], 17°.5	"
" "	"	2.526, 17°.8	
Sodium vanadium vanadate.	$2Na_2O$. $2V_2O_4$. V_2O_5. 6 H_2O.	1.389, 15°	Brierly. J. 49, 30.
" " "	$2Na_2O$. $2V_2O_4$. V_2O_5. 13 H_2O.	1.327, 15°	"
Potassium vanadium vanadate.	$5K_2O$. $2V_2O_4$. $4V_2O_5$. H_2O.	1.213, 15°	"
Ammonium vanadium vanadate.	$3Am_2O.2V_2O_4.4V_2O_5$. 6 H_2O.	1.335, 15°	"

* Penfield's mineral contained some copper and arsenic. Frenzel's tritochorite (G. [illegible]) ha[s]
† Formula somewhat doubtful.
‡ R in this formula = ¾ Cu and ¼ Ca + Ba.

XXXV. ARSENITES AND ARSENATES.

1st. Normal Orthoarsenates.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
lium dihydrogen arsenate.	$NaH_2AsO_4.H_2O$	2.535	Schiff. A. C. P. 112, 88.
" " "	"	2.6700	Dufet. B. S. M. 10, 77.
" " "	$NaH_2AsO_4.2H_2O$	2.320	Joly and Dufet. C. R. 102, 1398.
" " "	"	2.3093	Dufet. B. S. M. 10, 77.
isodium hydrogen arsenate.	$Na_2HAsO_4.7H_2O$	1.871	Schiff. A. C. P. 112, 88.
" " "	"	1.8825	Dufet. B. S. M. 10, 77.
" " "	$Na_2HAsO_4.12H_2O$	1.759	Thomson. See Böttger.
" " "	"	1.736	Playfair and Joule. M. C. S. 2, 401.
" " "	"	1.670	Schiff. A. C. P. 112, 88.
" " "	"	1.6675	Dufet. B. S. M. 10, 77.
Trisodium arsenate	Na_3AsO_4	2.8128 } 21°	Stallo. F. W. C.
" "	"	2.8577 } 21°	Stallo. F. W. C.
" "	$Na_3AsO_4.12H_2O$	1.804	Playfair and Joule. M. C. S. 2, 401.
" "	"	1.762	Schiff. A. C. P. 112, 88.
" "	"	1.7593	Dufet. B. S. M. 10, 77.
Potassium dihydrogen arsenate.	KH_2AsO_4	2.638	Thomson. See Böttger.
" " "	"	2.832	Schiff. A. C. P. 112, 88.
" " "	"	2.844 }	Schröder. Dm. 1878.
" " "	"	2.853 }	Schröder. Dm. 1878.
" " "	"	2.855 }	Schröder. Dm. 1878.
" " "	"	2.862	Topsoë. B. S. C. 19, 246.
Ammonium dihydrogen arsenate.	AmH_2AsO_4	2.249	Schiff. A.C.P.112, 88.
" "	"	2.299 }	Schröder. Dm. 1878.
" "	"	2.309 }	Schröder. Dm. 1878.
" "	"	2.312 }	Schröder. Dm. 1878.
" "	"	2.308	Topsoë. C. C. 4, 76.
Diammonium hydrogen arsenate.	Am_2HAsO_4	1.989	Schiff. A. C. P. 112, 88.
...ium sodium hydrogen arsenate.	$KNaHAsO_4.7H_2O$	1.884	Schiff. A. C. P. 112, 88.
...nium sodium hy... arsenate.	$AmNaHAsO_4.4H_2O$	1.838	" "
...te	$Mg_3(AsO_4)_2.8H_2O$	2.474	Haidinger. J. 18, 784.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORI[TY]
Magnesium hydrogen arsenate.	$(H Mg As O_4)_2 . H_2O$	3.155, 15°	Schulten. C. [...] 877.
Köttigite	$Zn_3 (As O_4)_2 . 8 H_2O$	3.1	Köttig. J. 2[...]
Native nickel arsenate	$Ni_3 (As O_4)_2$	4.982	Bergemann. [...] 728.
Erythrite	$Co_3 (As O_4)_2 . 8 H_2O$	2.948	Dana's Miner[...]
Cabrerite	$(Ni Co Mg)_3 (As O_4)_2 . 8 H_2O$	2.96	Ferber. B. H[...] 22, 306.
Roselite	$(Ca Co Mg)_3 (As O_4)_2 . 2 H_2O$	3.5—3.6	Schrauf. N. J. [...] 870.
"	"	3.46, 3°	Weisbach. [...] 1874, 871.
Caryinite	$(Pb Mn Ca)_3 (As O_4)_2$	4.25	Lundström. [...] Min., 3d Ap[...]
Berzeliite	$Mg_3 Ca_3 (As O_4)_4$	2.52	Dana's Miner[...]
Haidingerite	$H Ca As O_4 . H_2O$	2.848	Turner. Dana'[...]
Pharmacolite	$2 H Ca As O_4 . 5 H_2O$	2.64—2.73	Dana's Miner[...]
Wapplerite	$H (Ca Mg) As O_4 . 7 H_2O$	2.48	Frenzel. D[...] Min., 2d A[...]
Forbesite	$2 H (Co Ni) As O_4 . 7 H_2O$	3.086	Forbes. P. [...] 25, 108.
Scorodite	$Fe''' As O_4 . 2 H_2O$	3.11	Damour. An[...] 10, 406.
"	"	3.18	
" Artificial	"	3.28	Verneuil and [...]geois. C. [...] 224.
Carminite	$Pb_3 Fe'''_{10} (As O_4)_{12}$	4.105	Dana's Miner[...]
Trögerite	$(U O_2)_3 (As O_4)_2 . 12 H_2O$	3.23	Weisbach. [...] 1873, 316.
Uranospinite	$(U O_2)_2 Ca (As O_4)_2 . 8 H_2O$	3.45	"
Zeunerite	$(U O_2)_2 Cu (As O_4)_2 . 8 H_2O$	3.53	"

2d. Basic Orthoarsenates.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORIT[Y]
Adamite	$Zn_2 (O H) As O_4$	4.338, 18°	Friedel. C. [...] 692.
Native nickel arsenate	$Ni_5 O_2 (As O_4)_2$	4.838	Bergemann. [...] 728.
Olivenite	$Cu_2 (O H) As O_4$	4.378	Damour. An[...] 13, 404.
"	"	4.135	Hermann. J. [...] 33, 291.
Clinoclasite	$Cu_3 (O H)_3 As O_4$	4.19—4.36	Dana's Min[...]
"	"	4.312	Damour. An[...] 13, 404.
"	"	4.38, 19°	Hillebrand. [...] communicat[...]
Euchroite	$Cu_3 (OH)_3 As O_4 . 6H_2O$	3.389	Dana's M[...]
Erinite	$Cu_5 (O H)_4 (As O_4)_2$	4.043	"

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
te	$Cu_5(OH)_4(AsO_4)_2.H_2O$	4.160	Dana's Mineralogy.
	$Cu_5(OH)_4(AsO_4)_2.7H_2O$	3.02—3.098	" "
	"	3.162	Church. J.C.S. 26, 108.
	"	3.27, 20°.5	Hillebrand. Private communication.
yllite	$Cu_8(OH)_{10}(AsO_4)_2.7H_2O$	2.659	Damour. Ann. (3), 13, 404.
	"	2.435	Hermann. J. P. C. 33, 294.
cite	$CuCa(OH)AsO_4$	4.123	Fritzsche. J. 2,772.
ite	$Cu_3Pb(OH)_2(AsO_4)_2.H_2O$	5.35	Church. J.C.S. 18, 265.
te	$Cu_3Al(OH)_4AsO_4.4H_2O$	2.926	Haidinger. Dana's Min.
	"	2.964	Damour. Ann. (3), 13, 404.
	"	2.985	Hermann. J. P. C. 33, 296.
xite	$Cu_3Fe'''_2(OH)_6(AsO_4)_2$	3.93	Pisani. C. R. 62, 690.
osiderite	$Fe'''_4(OH)_3(AsO_4)_3$	2.9—3.0	Dana's Mineralogy.
iderite	$Fe'''_4Ca_3(OH)_9(AsO_4)_3$	3.520	Dufrenoy.
	"	3.88	Rammelsberg.
	"	3.86	Church. J.C.S. 26, 102.
e	$Mn_7(OH)_8(AsO_4)_2$	3.83—3.85	Sjögren. A.J.S. (3), 27, 494.
	$Bi_5(OH)_9(AsO_4)_2$	6.82, 22°	Weisbach. N. J. 1874, 302.
	$BiCu_{10}(OH)_8(AsO_4)_5.7H_2O$	2.66	Schrauf. Z. K. M. 4, 277.
	"	3.79, 23°.5	Hillebrand. Private communication.
gite	$(UO_2)_3Bi_{10}(AsO_4)_4(OH)_{24}$	5.64	Weisbach. N. J. 1878, 316.

3d. Pyroarsenates and Arsenites.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
um pyroarsenate	$Mg_2As_2O_7$	3.7305, 15°	Stallo. F. W. C.
"	"	3.7649, 18°	
oarsenate	$Zn_2As_2O_7$	4.6989, 21°	" "
"	"	4.7034, 21°	
se pyroarsenate	$Mn_2As_2O_7$	3.6625, 25°	" "
"	"	3.6882, 28°	
"	"	3.6927, 28°	
[illegible]	$PbAs_2O_4$	5.85, 23°	Schafarik. J. P. C. 90, 12.

XXXVI. PHOSPHATES, VANADATES, AND ARSENAT[cut off] COMBINED WITH HALOIDS.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORIT[cut off]
Sodium fluo-phosphate*	$Na_4(PO_4)F. 12H_2O$	2.2165	Briegleb. J.
Sodium fluo-arsenate*	$Na_4(AsO_4)F. 12H_2O$	2.849	Briegleb. J.
Wagnerite	$Mg_2(PO_4)F$	2.985 } 15°	Rammelsberg. 64, 251.
"	"	3.068 } 15°	
"	"	3.12	Pisani. Z. K 3, 645.
Artificial vanadium wagnerite.	$Ca_2(VO_4)Cl$	4.01	Hautefeuille. S. (2), 12, 1[cut off]
Herderite	$Ca\,Gl(PO_4)F$	3.00	Hidden and [cut off] intosh. A. (3), 27, 135.
"	"	3.006 }	Penfield and H[cut off] A. J. S. (3), 2[cut off]
"	"	3.012 }	
Triplite	$(Fe\,Mn)_2(PO_4)F$	3.617	Bergemann. J 79, 414.
"	"	3.83—3.90	Siewert. J. 26,
Amblygonite	$Al\,Li(PO_4)F$	3.118	Breithaupt. J 16, 476.
"	"	3.088	Penfield. A. (3), 18, 295.
"	"	3.046	Brush. A. J. 34, 243.
Durangite	$Al\,Na(AsO_4)F$	3.937	Brush. A. J. 11, 464.
Fluorapatite	$Ca_5(PO_4)_3F$	3.166—3.235	G. Rose. P. 185.
"	"	3.091—3.216	Pusirewski. 763.
"	"	3.25	Church. J. 26, 101.
Chlorapatite	$Ca_5(PO_4)_3Cl$	3.054, artif.	Manross. J.
"	"	2.98 "	Daubreé. "[cut off] synthétique
Pyromorphite	$Pb_5(PO_4)_3Cl$	7,008, artif.	Manross. J.
"	"	7.054—7.208	G. Rose. P. 209.
"	"	7.36	Fuchs. J. 20
Vanadinite	$Pb_5(VO_4)_3Cl$	6.707, 12°, artif.	Roscoe. Z. 357.
"	"	6.886	Rammelsberg. 872.
"	"	6.863	Struve. J. 1[cut off]
Mimetite	$Pb_5(AsO_4)_3Cl$	7.218	Rammelsberg. 856.
"	"	7.32	Smith. J. 8,
" Artificial	"	7.12	Michel. B. 10, 185.
Ekdemite	$Pb_5(AsO_4)_2Cl_4$	7.14	Nordenskiöld. M. 2, [illegible]
Endlichite	$Pb_5(AsO_4)_3Cl, + Pb_5(VO_4)_3Cl.$	6.864	Genth. Am. Soc., [illegible]

* Baker (J. C. S., May, 1885) assigns more complex formulæ to these [cut off]

XXXVII. ANTIMONITES AND ANTIMONATES.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Sodium antimonite	$Na\,Sb\,O_2.\ 3\,H_2O$	2.864	Terreil. Ann. (4), 7, 350.
Sodium hydrogen antimonite.	$Na\,H_2\,(Sb\,O_3)_3$	5.05	" "
Romeite	$Ca\,(Sb\,O_3)\,(Sb\,O_3)$?	4.675	Damour. J. 6, 837.
"	"	4.714	
Atopite	$Ca_2\,Sb_2\,O_7$	5.03	Nordenskiöld. Dana's Min., 3d App.
Barcenite	$Ca\,Hg\,(Sb\,O_3)_4$	5.353, 20°	Mallet. A. J. S. (3), 16, 306.
Monimolite	$Pb_4\,(Sb\,O_4)_2\,O$	5.94	Igelström. Dana's Min.
Bindheimite	$Pb_3\,(Sb\,O_4)_2.\ 4H_2O$	4.60—4.76	Hermann. J. P. C. 34, 179.
"	"	5.01, 19°	Hillebrand. Bull. 20, U. S. G. S.
Nadorite	$Pb\,(Sb\,O_2)\,Cl$	7.02	Flajolot. J. 23, 1280.
Stibioferrite	$4\,Fe'''\,Sb\,O_4.\ 3\,H_2O$	3.598	Goldsmith. Dana's Min., 2d App.
Thrombolite	$Cu_{10}\,Sb_6\,O_{19}.\ 19\,H_2O$	3.668	Schrauf. Z. K. M. 4, 28.

XXXVIII. COLUMBATES AND TANTALATES.*

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Magnesium columbate	$Mg_4\,Cb_2\,O_9$	4.3	Joly. C. R. 81, 268.
Manganese columbate	?	4.94	Joly. B. S. C. 25, 67.
Columbite	$Fe\,Cb_2\,O_6$	5.469—5.495	Schlieper. Dana's Min.
"	"	5.447	Oesten. Dana's Min.
"	"	5.432—5.452	Breithaupt. J. 11, 720.
"	"	5.40—5.42	Müller. J. 11, 721.
Manganese columbite	$Mn\,(Cb\,O_3)\,(Ta\,O_3)$	6.59	Comstock. A. J. S. (3), 19, 131.
Tantalite	$Fe\,Ta_2\,O_6$	7.264	Nordenskiöld. P. A. 26, 488.
"	"	7.936	Berzelius. Dana's Min.
"	"	7.703	Jenzsch. Dana's Min.
"	"	7.277—7.414	Rose. J. 11, 720.
"	"	7.2	Smith. A. J. S. (3), 14, 323.
Mangantantalite	$Mn\,Ta_2\,O_6$	7.37	Arzruni. J. C. S. 54, 234.
Sipylite	$Er\,Cb\,O_4$	4.883, 16°	Mallet. Z. K. M. 6, 518.

* For samarskite, microlite, fergusonite, and other natural columbotantalates see Dana's Mineralogy. The formulæ here assigned to columbite, tantalite, and sipylite are only approximative, representing the typical compounds.

XXXIX. CARBONATES.

1st. Simple Carbonates.

NAME.	FORMULA.	SP. GRAVITY	AU
Lithium carbonate	$Li_2 C O_3$	2.111	Krem
" "	"	1.787, fused	Quinc 141.
Sodium carbonate	$Na_2 C O_3$	2.4659	Karst 65,
" "	"	2.430	Playf M.
" "	"	2.509	Filhol 21,
" "	"	2.407, 20°.5	Favre C. R
" "	"	2.490 }	Schröd
" "	"	2.510 }	
" "	"	2.041, 960°	Braun 13,
" "	"	2.45, fused	Quincl 642.
" "	$Na_2 C O_3 . 8 H_2 O$	1.51	Thom Phil
" "	$Na_2 C O_3 . 10 H_2 O$	1.423	Haidi ger.
" "	"	1.454, m. of 4	Playf M.
" "	"	1.475	Schiff.
" "	"	1.463	Buign
" "	"	1.455, 15°.5	Holke 27,
" "	"	1.4402	Stolba 503.
" "	"	1.456, 19°	Favre C. R
Thermonatrite	$Na_2 C O_3 . H_2 O$	1.5—1.6	Dana's
Potassium carbonate	$K_2 C O_3$	2.2643	Karste 65,
" "	"	2.103	Playfa M.
" "	"	2.267	Filhol 21,
" "	"	2.105	W. C. J. P
" "	"	2.00, 1150°	Braun 13,
Silver carbonate	$Ag_2 C O_3$	6.0766	Karste 65,
" "	"	6.0, 17°.5	Kreme 43.
Thallium carbonate	$Tl_2 C O_3$	7.06	Lamy.
" "	"	7.164	Lamy sean 116.
Magnesium carbonate	$Mg C O_3$	3.037	Neum 28, 1

Name.	Formula.	Sp. Gravity.	Authority.
Magnesium carbonate	$Mg\,C\,O_3$	3.056	Mohs.
" "	"	3.065	Scheerer.
" "	"	3.017	Breithaupt.
" "	"	3.033	Hauer.
" "	"	3.017	Marchand and Scheerer. J. 3, 760.
" "	"	3.007 }	Jenzsch. J. 6, 848.
" "	"	3.076 }	
" "	"	3.033	Zepharovich. J. 8, 975.
" "	"	3.015	Zepharovich. J. 18, 906.
" "	$Mg\,C\,O_3.\ 3\,H_2\,O$	1.875	Beckurts. J. C. S. 42, 14.
c carbonate	$Zn\,C\,O_3$	4.339	Smithson.
"	"	4.442	Mohs. See Böttger.
"	"	4.3765	Karsten. Schw. J. 65, 394.
"	"	4.45	Naumann.
"	"	4.42	Haidinger.
mium carbonate	$Cd\,C\,O_3$	4.42, 17°	Herapath. P. M. 64, 321.
" "	"	4.4938	Karsten. Schw. J. 65, 394.
" "	"	4.258	Schröder. Dm. 1873.
cium carbonate	$Ca\,C\,O_3$	2.7000 }	Karsten. Schw. J. 65, 394.
" " Chalk	"	2.6946 }	
" " Aragonite	"	2.931	Haidinger.
" " "	"	2.927	Biot.
" " "	"	2.945 }	Beudant.
" " "	"	2.947 }	
" " "	"	2.931	Mohs.
" " "	"	2.938 }	Breithaupt.
" " "	"	2.995 }	
" " "	"	2.926	Neumann. P. A. 23, 1.
" " "	"	2.933, 0°	Kopp.
" " "	"	2.93	Nendtwich.
" " "	"	2.92	Riegel. J. 4, 819.
" " "	"	2.93	Stieren. J. 9, 882.
" " "	"	2.932	Luca. J. 11, 732.
" " Calcite	"	2.7064 }	Karsten. Schw. J. 65, 394.
" " "	"	2.6987 }	
" " "	"	2.7213 }	Beudant.
" " "	"	2.7234 }	
" " "	"	2.750	Neumann. P. A. 23, 1.
" "	"	2.702	Hochstetter. J. 1, 1222.
" "	"	2.72	Kopp. J. 16, 5.
" "	" Artificial	2.71	Bourgeois. Ann. (5), 29, 493.
"	$Ca\,C\,O_3.\ 5\,H_2\,O$	1.783	Pelouze.
"	"	1.75	Salm-Horstmar. P. A. 35, 515.
ium carbonate	$Sr\,C\,O_3$	3.605	Mohs. See Böttger.

NAME.	FORMULA.	SP. GRAVITY.	AUTHOI
Strontium carbonate	$Sr\,C\,O_3$	3.6245	Karsten. { 65, 394.
" "	"	3.618	v. der Marc 759.
" " Precip.	"	3.548	Schröder. I 226.
" " "	"	3.620	
Barium carbonate	$Ba\,C\,O_3$	4.24	Breithaupt.
" "	"	4.301	Mohs.
" "	"	4.35	Kirwan.
" "	"	4.3019	Karsten. S 65, 394.
" "	"	4.565	Filhol. A 21, 415.
" " Precip.	"	4.216	Schröder. I 226.
" " "	"	4.235	
" " "	"	4.372	
" " Ppt. hot	"	4.1721	Schweitzer. trib. Lab. Missouri,
" " "	"	4.1975	
" " Ppt. cold	"	4.1609	
" " "	"	4.2811	
Lead carbonate	$Pb\,C\,O_3$	6.465	Mohs. See
" "	"	6.5	John.
" "	"	6.47	Breithaupt.
" "	"	6.4277	Karsten. S ger.
" "	"	6.60	Smith. J. {
" "	"	6.510	Schröder. Ergänz. B
" "	"	6.517	
Manganese carbonate	$Mn\,C\,O_3$	3.592	Mohs. See
" "	"	3.553	Kersten. J 37, 163.
" "	"	3.6608	Kranz.
" "	"	3.57	Grüner. J
" " Ppt.	"	3.122	Schröder. 106, 226.
" " "	"	3.129	
Iron carbonate	$Fe\,C\,O_3$	3.829	Mohs. See
" "	"	3.815	Dufrenoy.
" "	"	3.872	Neumann. 23, 1.
" "	"	3.698	Breithaupt. 14, 445.
" "	"	3.796, 0°	Kopp.
Lanthanite	$La_2\,(C\,O_3)_3.\ 8\,H_2\,O$	2.605, 20°	Genth. A. J 28, 425.
"	"	2.666	Blake. J. {
Didymium carbonate	$Di_2\,(C\,O_3)_3.\ 8\,H_2\,O$	2.850, 15°	Cleve. U. 1885.
" "	"	2.872, 15°	

2d. Double Carbonates.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Hydrogen sodium carbonate.	$Na\ H\ C\ O_3$	2.192, m. of 2.	Playfair and Joule. M. C. S. 2, 401.
" " "	"	2.163	Buignet. J. 14, 15.
" " "	"	2.2208, 15°	Stolba. J. P. C. 97, 508.
" " "	"	2.207	Schröder. Dm. 1873.
" " "	"	2.205	
" " "	"	2.159	W. C. Smith. Am. J. P. 53, 148.
[illegible]	$Na_3H\ (C\ O_3)_2.\ 2\ H_2O$	2.1478, 21°	Chatard. Private communication.
Hydrogen potassium carbonate.	$K\ H\ C\ O_3$	2.012	Gmelin.
" " "	"	2.092	Playfair and Joule. M. C. S. 2, 401.
" " "	"	2.180	Buignet. J. 14, 15.
" " "	"	2.140	Schröder. Dm. 1873.
" " "	"	2.167	
" " "	"	2.078	W. C. Smith. Am. J. P. 53, 145.
Hydrogen ammonium carbonate.	$Am\ H\ C\ O_3$	1.586	Playfair and Joule. M. C. S. 2, 401.
Sodium potassium carbonate.	$K\ Na\ C\ O_3$	2.5289	Stolba. J. 18, 166.
" " "	"	2.5633	
" " "	$K\ Na\ C\ O_3.\ 12\ H_2O$	1.6088	" "
" " "	"	1.6334	
Silver potassium carbonate.	$Ag\ K\ C\ O_3$	3.769	Schulten. C. R. 105, 813.
Gaylussite	$Na_2Ca\ (C\ O_3)_2.\ 5\ H_2O$	1.928	Boussingault. Ann. (2), 31, 270.
"	"	1.950	
Dolomite	$Ca\ Mg\ (C\ O_3)_2$	2.914	Neumann. P. A. 28, 1.
"	"	2.918	
"	"	2.89	Ott. J. 1, 1223.
"	"	2.924	Tschermak. J. 10, 695.
"	"	2.85	Senft. J. 14, 1027.
Hydrodolomite	$Ca\ Mg_2\ (C\ O_3)_3.\ H_2O$	2.495	Rammelsberg. Dana's Min.
"	"	2.86	Hermann. J. P. C. 47, 18.
Bromlite	$Ca\ Ba\ (C\ O_3)_2$	3.718	Thomson.
"	"	3.76, 15°.5	Johnston. P. M. (3), 6, 1.
Barytocalcite	"	3.66	Children. Ann. Phil. (2), 8, 114.
Manganocalcite	$Ca\ Mn_2\ (C\ O_3)_3$	3.037	Breithaupt. P. A. 69, 429.
[illegible]ite	$Mg\ Fe\ (C\ O_3)_2$	3.412	Breithaupt. P. A. 70, 146.
"	"	3.417	
[illegible]	$Mg_2\ Fe\ (C\ O_3)_3$	3.349	Breithaupt. P. A. 11, 170.
"	"	3.363	

NAME.	FORMULA.	SP. GRAVITY.	AUTHO
Ankerite	$Ca\,(Mg\,Fe)\,(C\,O_3)_2$	3.01	Luboldt. Min.
"	"	3.008	Ettling. Min.
"	"	3.072	Boricky. 1245.
Dawsonite	$Al\,Na\,(C\,O_3)\,(O\,H)_2$	2.40	Harrington. Min., 2d

3d. Basic Carbonates.

NAME.	FORMULA.	SP. GRAVITY.	AUTHOR
Hydromagnesite	$Mg_4\,(C\,O_3)_3\,(O\,H)_2.\,3\,H_2\,O.$	2.145	Smith and B 6, 851.
"	"	2.180	
Hydrogiobertite	$Mg_2\,C\,O_4.\,3\,H_2\,O$	2.149—2.174	Scacchi. Se M. 12, 20
Hydrozincite	$Zn_3\,(C\,O_3)\,(O\,H)_4$	3.252	Petersen an A. C. P.
Zaratite	$Ni_3(CO_3)(OH)_4.4H_2O$	2.57	B. Silliman, 1, 1225.
"	"	2.693	
Malachite	$Cu_2\,(C\,O_3)\,(O\,H)_2$	3.715	Breithaupt. J. 68, 291.
"	"	3.898	Breithaupt. 16, 475.
"	"	4.06	Smith. J. 8,
Azurite	$Cu_3\,(C\,O_3)_2\,(O\,H)_2$	3.88	"
"	"	3.5—3.831	Dana's Min
Bismutosphærite	$Bi_2\,C\,O_5$	7.28—7.32	Weisbach. 34, 117.
"	"	7.42	Wells. A. J. 34, 271.
Bismutite	$Bi_2\,H_2\,C\,O_6$	6.86	Louis. J. C 33.

XL. SILICATES.*

1st. Silicates Containing But One Metal.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
m metasilicate	$Na_2 Si O_3 . 8 H_2 O$	1.666, 18°	F. W. Clarke.
akite	$Gl_2 Si O_4$	2.966 }	Kokscharow. J. 10, 664.
	"	2.996 }	
	"	2.967, 23°	Hillebrand. Bull. 20, U. S. G. S.
	"	2.95	Hatch. N. J. 1888, 171.
andite	$Gl_4 H_2 Si_2 O_9$	2.598	Bertrand. B. S. M. 3, 96.
	"	2.586	Damour. B. S. M. 6, 252.
	"	2.55	Scharizer. Z. K. M. 14, 41.
atite	$Mg Si O_3$	3.19	Damour. Dana's Min.
"	"	3.10—3.13	Kenngott. J. 8, 928.
"	"	3.153	Bröggerand v. Rath. Z. K. M. 1, 22.
" Artificial	"	3.11	Hautefeuille. J. 17, 212.
terite	$Mg_2 Si O_4$	3.243	Rammelsberg. J. 13, 757.
" Boltonite	"	3.008	Silliman, Jr. J. 2, 742.
" "	"	3.208 }	Smith. J. 7, 821.
" "	"	3.328 }	
	$Mg_3 H_2 Si_4 O_{12}$	2.48—2.80	Scheerer. J. 4, 793.
	"	2.682	Senft. Z. G. S. 14, 167.
entine	$Mg_3 H_4 Si_2 O_9$	2.557	Rammelsberg. J. 1, 1195.
"	"	2.644	Delesse. J. 1, 1195.
"	"	2.57	Hermann. J. 2, 764.
"	"	2.564—2.593	Gilm. J. 10, 678.
"	"	2.597—2.622	Hunt. J. 11, 715.

* For sp. gr. of silicates before and after fusion see v. Kobell, Bei. 6, 314.

TE.—As regards the natural silicates this table is far from complete. Only those ounds are included which admit of fairly definite chemical formulation, and only typical determinations of specific gravity are given in each case. Furthermore, angement is absolutely chemical, and is in no sense dependent upon mineralog- onsiderations. Thus, for example, all the magnesium silicates are brought to- r; and so also are the numerous double silicates of aluminum and calcium, quite less of their classification as mineral species. Many micas, chlorites, scapolites, d altogether; but the omissions are not serious, for all the important r times collected in the larger treatises on mineralogy, and are, ble.

NAME.	FORMULA.	SP. GRAVITY.	AUTHOI
Willemite	$Zn_2 Si O_4$	4.18	Levy. B. J.
"	"	4.02	Hermann. J
"	"	4.11 } 4.16 }	Mixter. J.
"	"		
" Artificial	"	4.25	Gorgeu. B. 146.
Calamine	$Zn_2 Si O_4 . H_2 O$	3.485	Hermann. 33, 98.
"	"	3.43—3.49	Monheim. J.
"	"	3.42	Schnabel. J.
"	"	3.86	Wieser. J.
"	"	3.388, 21°	McIrby. J.
Wollastonite	$Ca Si O_3$	2.884	Seibert. Se ger.
"	"	2.853	v. Rath. J.
"	"	2.799	Piquet. J. 2
" Artificial	"	2.7	Bourgeois. A 29, 441.
" "	"	2.88	Gorgeu. A 4, 515.
Xonaltite	$4 Ca Si O_3 . H_2 O$	2.710—2.718	Rammelsber 982.
Okenite	$Ca Si_2 O_5 . 2 H_2 O$	2.324	Schmidt. J.
"	"	2.28	Kobell. Dan
"	"	2.362	Connel. Dan
Rhodonite	$Mn Si O_3$	3.63	Hermann. J
"	"	3.68	Igelström. J
"	"	3.65	Fino. J. 86
" Artificial	"	3.68	Gorgeu. Am 515.
Hydrorhodonite	$Mn Si O_3 . H_2 O$	2.70	Engström.
Penwithite	$Mn Si O_3 . 2 H_2 O$	2.49	Collins. Z. 5, 623.
Tephroite	$Mn_2 Si O_4$	4.1	Brush. J. 1
"	"	4.0	Mixter. S. 2
" Artificial	"	4.34	Gorgeu. C. 920.
" "	"	4.08	Gorgeu. A 4, 515.
Friedelite	$Mn_4 H_4 Si_3 O_{12}$	3.07	Bertrand. C 1167.
Grunerite	$Fe Si O_3$	3.713	Gruner. C. 794.
Fayalite	$Fe_2 Si O_4$	4.138	Gmelin. B.J.
"	"	4.006	Delesse. J.
" Artificial	"	4.4	Gorgeu. A 4, 515.
Chrysocolla	$Cu Si O_3 . 2 H_2 O$	2.0—2.238	Dana's Min
Dioptase	$Cu H_2 Si O_4$	3.314 } 3.348 }	Kenngott. J
"	"		
Kyanite	$Al_2 O_2 Si O_3$	3.48	Igelström. J
"	"	3.661	Erdmann. 311.
"	"	3.678	Jacobson. 416.
Andalusite	$Al_3 (Si O_4)_3 (Al O)_3$	3.070	[illegible]
"	"	3.154	[illegible]

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
dalusite	$Al_2 (Si O_4)_2 (Al O)_2$	3.152	Kersten. J. P. C. 37, 163.
"	"	3.160	Damour. Ann. d. Mines (5), 4, 53.
"	"	3.07—3.12	Schmid. P. A. 97, 113.
brolite	"	3.18—3.21	Damour. J. 18, 881.
"	"	3.239	Erdmann. B. J. 24, 311.
"	"	3.238	Dana. Dana's Min.
"	"	3.232	Brush. " "
umortierite	$Al_2 (Si O_4)_3 (Al O)_6$	3.36	Damour. Z. K. M. 6, 289.
enolite	$Al_4 (Si O_4)_3$	3.58	Nordenskiöld. P. A. 56, 643.
aolinite	$Al_2 O H (Si O_4)_2 H_3$	2.6	Clark. J. 4, 786.
"	"	2.4—2.63	Dana's Mineralogy.
"	"	2.611	Hillebrand. Bull. 20, U. S. G. S.
Pyrophyllite	$Al H (Si O_3)_2$	2.78—2.79	Sjögren. J. 2, 757.
"	"	2.81	Brush. J. 11, 707.
"	"	2.804	Genth. Z. K. M. 4, 384.
"	"	2.82	Tyson and Allen. J. 15, 745.
"	"	2.812	Genth. J. 36, 1903.
Allophane	$Al_2 Si O_5 . 6 H_2 O$	2.02	Schnabel. J. 2, 756.
"	"	1.85—1.89	Dana's Mineralogy.
Szaboite	$Fe'''_2 (Si O_3)_3$	3.505	Koch. Z. K. M. 3, 308.
Nontronite. Chloropal	$Fe'''_2 (Si O_3)_3 . 5 H_2 O$	1.727—1.870	Dana's Mineralogy.
" "	"	2.105	Thomson. Dana's Min.
Zircon	$Zr Si O_4$	4.047	Damour. J. 1, 1171.
"	"	4.595	Wetherill. J. 6, 796.
"	"	4.602 }	Hunt. J. 4, 768.
"	"	4.625 }	
"	"	4.395 } before	Church. J. 17, 834.
"	"	4.515 } heating.	
"	"	4.438 } after	
"	"	4.863 } heating	
"	"	4.709, 21°	Cross and Hillebrand. J. 36, 1839.
Cerium orthosilicate	$Ce_4 (Si O_4)_3$	4.9	Didier. C. R. 19, 882.
Thorium metasilicate	$Th (Si O_3)_2$	5.56, 25°	Troost and Ouvrard. C. R. 105, 255.
Thorium orthosilicate	$Th Si O_4$	6.82, 16°	" "
Thorite. (Orangite)	$2 Th Si O_4 . 3 H_2 O ?$	5.397	Bergemann. P. A. 82, 562.
" "	"	5.34	Krantz. P. A. 82, 586.
" "	"	5.19	Damour. Ann. d. Mines (5), 1, 587.
" "	"	4.888—5.205	Chydenius. P. A. 119, 48.
" (Ordinary)	"	4.344—4.897	" "
	$Bi_4 (Si O_4)_3$	5.912—6.006	Dana's Mineralogy.
	"	6.106, 17°	v. Rath. J. 22, 1209.

2d. Silicates Containing More Than One Metal.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORI
Pectolite	$H Na Ca_2 (Si O_3)_3$	2.784	Scott. J. 5,
"	"	2.778—2.881	Heddle and G 8, 952.
"	"	2.873	Clarke. Bull. S. G. S.
Malacolite	$Ca Mg (Si O_3)_2$	3.37	Bonsdorff. Min.
"	"	3.285	Haushofer. 984.
"	"	3.192	Doelter. Z. 4, 89.
"	"	3.278—3.275	Hunt. Dana's
Tremolite	$Ca Mg_3 (Si O_3)_4$	2.930—3.004	Rammelsberg. 694.
"	"	2.99	Michaelson. Min.
"	"	2.996, 22°	König. Z. 1, 50.
Hedenbergite	$Ca Fe (Si O_3)_2$	3.467, 25°	Wolff. J. P. 236.
"	"	3.492	Doelter. Z. 4, 90.
Monticellite	$Ca Mg Si O_4$	3.119	Rammelsberg. 758.
"	"	3.05	Freda. J. 36,
Knebelite	$Fe Mn Si O_4$	3.714, 18°.5	Doebereiner. J. 21, 49.
"	"	4.122	Erdmann. Min.
Kentrolite	$Mn'''_2 Pb_2 Si_2 O_9$	6.19	v. Rath. Z. 5, 35.
Melanotekite	$Fe'''_2 Pb_2 Si_2 O_9$	[illegible]	Lindström. M. 6, 515.
[illegible]	[illegible]	[illegible]	Nordenskiöld.
Petalite	[illegible]	[illegible]	Rammelsberg. 858.
"	"	[illegible]	Damour. Min.
" Castorite	"	[illegible]—2.401	Breithaupt. 69. 438.
Spodumene	[illegible]	[illegible]	Mohs. See Böt
	"	[illegible]	Rammelsberg. 857.
"	"	[illegible]	Pisani. Z. K. 109.
" Hiddenite	"	[illegible]	Genth. Z. K. 522.
[illegible]	[illegible]	[illegible]	Brush and Dan
"	"	[illegible]	J. S. (3), [illegible]
[illegible]	[illegible]	[illegible]	Hautefeuille. [illegible]
"	[illegible]	[illegible]	[illegible]
Albi[illegible]	[illegible]	[illegible]	[illegible]

Name.	Formula.	Sp. Gravity.	Authority.
	$Al\ Na\ Si_3\ O_8$	2.609, 12°	Streng. J. 24, 1151.
	"	2.59	Leeds. J. 26, 1166.
	"	2.604	Genth. J. 36, 1896.
	"	2.618	Baerwald. J. 36, 1897.
	"	2.601	Lacroix. Z. K. M. 14, 112.
Artificial	"	2.61	Hautefeuille. Z. K. M. 2, 107.
e	$Al\ Na\ (Si\ O_3)_2$	3.26—3.36	Damour. B. S. M. 4, 157.
	"	3.33	Damour. Z. K. M. 6, 290.
	"	3.326—3.355	Hallock. (Unpublished data from U. S. National Museum.)
	"	3.26—3.34	Hawes.
	"	3.35	Taylor.
elite	$Al_8\ Na_8\ Si_9\ O_{34}$	2.56—2.617	Scheerer. P. A. 49, 359.
	"	2.629	Kimball. J. 13, 762.
	"	2.600—2.6087	Rammelsberg. Z. G. S. 29, 78.
	"	2.60—2.68	Lorenzen. J. 36, 1884.
ite	$Al\ Na\ H_2\ Si_2\ O_7$	2.262—2.288	Waltershausen. J. 11, 711.
	"	2.236	Waltershausen. J. 6, 820.
	"	2.278	Thomson. Dana's Min.
	"	2.222	Bamberger. Z. K. M. 6, 83.
ophite	"	2.27	Weibye. J. 3, 735.
onite	$Al_3\ Na\ H_2\ (Si\ O_4)_3$	2.779	Schafhäutl. Dana's Min.
Pregrattite	"	2.895	Oellacher. Dana's Min.
Cossaite	"	2.890—2.896	Gastaldi. Dana's Min., 2d App.
onephelite	$Al_3\ Na_2\ H\ (Si\ O_4)_3.\ 3\ H_2\ O.$	2.263	Diller. A. J. S. (3), 31, 267.
lite	$Al_2\ Na_2\ H_4\ (Si\ O_4)_3$	2.207, 11°	Gmelin. J. 3, 733.
	"	2.254—2.258	Kenngott. J. 6, 820.
	"	2.249	Brush. A. J. S. (2), 31, 365.
clase	$Al\ K\ Si_3\ O_8$	2.5702	Breithaupt. See Böttger.
	"	2.573	Rammelsberg. J. 20, 988.
	"	2.576—2.586	v. Rath. J. 24, 1150.
	"	2.572—2.595	Genth. J. 36, 1896.
Artificial	"	2.55, 16°	Hautefeuille. Z. K. M. 2, 514.
	$Al\ K\ (Si\ O_3)_2$	2.519	Bischof. Dana's Min.

Name.	Formula.	Sp. Gravity.	Authori
Leucite	Al K (Si $O_3)_2$	2.48	Rammelsberg 852.
"	"	2.479, 23°	v. Rath. J. 2
" Artificial	"	2.47, 18°	Hautefeuille. M. 5, 411.
Muscovite	Al_3 K H_2 (Si $O_4)_3$	2.817	Kussin. Dana
"	"	2.714—2.796	Grailich. Min.
"	"	2.830—2.831	Tschermak. M. 3, 127.
"	"	2.855	Scharizer. Z. 12, 15.
Pollucite	Al_2 Cs_2 H_2 (Si $O_3)_5$	2.868—2.892	Breithaupt. 69, 439.
"	"	2.901	Pisani. J. 1
"	"	2.898	Rammelsberg M. 6, 286.
Grossularite	Al_2 Ca_3 (Si $O_4)_3$	3.522—3.536	Hunt. Dana
"	"	3.609	Websky. J. 2
"	"	3.572	Jannasch. 1880.
Anorthite	Al_2 Ca (Si $O_4)_2$	2.763	Rose. See B
"	"	2.73	Deville. J.
"	"	2.7825	Potyka. J. 1
"	"	2.668	Silliman. D Min.
"	"	2.686	v. Rath. J. 2
Idocrase	Al_4 Ca_8 (Si $O_4)_7$?	3.3123—3.3905	Karsten. See ger.
"	"	3.384	Rammelsberg 745.
"	"	3.44	Damour. J. 2
"	"	3.2533	Korn. J. 36
"	"	3.403—3.472	Jannasch. 1875.
Melilite	Al_2 Ca_6 Si_5 O_{19}	2.9—3.104	Dana's Mine
"	"	2.95	Damour. A 10, 59.
Meionite*	Al_6 Ca_4 Si_6 O_{25}	2.734—2.737	v. Rath. P. 87.
"	"	2.716, 16°	Neminar. J 1227.
Gehlenite	Al_2 Ca_3 Si_2 O_{10}	2.9—3.067	Dana's Mine
"	"	2.997	Janovsky. 1170.
Prehnite	Al_2 Ca_2 H_2 (Si $O_4)_3$	2.926	Mohs. See B
"	"	2.845–2.897, 4°	Streng. N. J 314.
"	"	3.042	Genth. J. 3
Heulandite	Al_2 Ca H_{10} Si_6 O_{21}	2.195	Thomson. Min.
"	"	2.1963	Jeremejew. Z 2, 503.
Stilbite	Al_2 Ca H_{12} Si_6 O_{22}	2.203	Münster. P. 297.

*For other data relative to the scapolite group see Dana's Mineralogy and also Tsch memoir in M. C. 4, 884.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
	$Al_2\,Ca\,H_{12}\,Si_6\,O_{22}$	2.184	Waltershausen. Dana's Min.
	"	2.16	Schmid. J. 24, 1158.
tite	$Al_2\,Ca\,H_6\,Si_4\,O_{16}$	2.268	Breithaupt. See Böttger.
	"	2.252	Mallet. Dana's Min.
	"	2.280—2.310	Gericke. J. 9, 861.
	$Al_2\,Ca_2\,H_6\,Si_3\,O_{13}$	2.398	Waltershausen. J. 6, 819.
	"	2.28	Collier. Dana's Min.
	"	2.27	Lüdecke. Z. K. M. 6, 312.
te	$Al_2\,Ca\,H_{12}\,Si_4\,O_{18}$	2.094	Breithaupt. See Böttger
	"	2.08—2.19	Dana's Mineralogy.
	"	2.133	Streng. Z. K. M. 1, 519.
	"	2.115	
	$Al_2\,Ca_2\,H\,Si_3\,O_{12}$	3.251—3.361	Rammelsberg. J. 9, 849.
	"	3.226—3.381	Breithaupt. Dana's Min.
ite	$Al_4\,Ca\,H_2\,Si_2\,O_{12}$	2.99	Hermann. J. P. C. 53, 16.
se	$Al_5\,Ca\,Na_3\,Si_{11}\,O_{32}$	2.66—2.68	Kerndt. J. 1, 1182.
	"	2.725	v. Rath. J. 11, 706.
	"	2.643—2.689	Petersen. J. 25, 1112.
e	$Al_3\,Ca\,Na\,Si_5\,O_{16}$	2.651—2.736	Delesse. J. 1, 1183.
	"	2.667—2.674	Hunt. J. 14, 995.
rite	$Al_7\,Ca_3\,Na\,Si_9\,O_{32}$	2.719—2.883	Delesse. J. 1, 1183.
	"	2.709	Damour. J. 3, 728.
	"	2.697	Hunt. J. 4, 782.
	"	2.72-2.77, 15°.5	Streng. J. 15, 786.
e	$Al_4CaNa_2H_4(SiO_3)_{10}.18\,H_2O.$	1.923	Damour. Ann. d. Mines (4), 1, 395.
nite	$2\,Al_2\,(Ca\,Na_2)\,Si_2\,O_8.5\,H_2O.$	2.35—2.38	Zippe. Dana's Min.
	"	2.357	Rammelsberg. J. P. C. 59, 348.
Lintonite	"	2.82—2.87	Peckham and Hall. A. J. S. (3), 19, 122.
te	$Al_2(CaNa_2)H_{12}Si_4O_{18}$	2.07	Damour. J. 12, 796.
	"	2.099—2.169	Dana's Mineralogy.
	"	2.100	Liversidge. J. 36, 1895.
	$Al_2\,Ca_2\,K\,H\,(Si_2\,O_5)_6$	2.5529	Ludwig. Z. K. M. 2, 631.
te	$Al_2\,(Ca\,K_2)\,H_8\,Si_4\,O_{16}$	2.201	Waltershausen. Dana's Min.
	"	2.213	Marignac. B. J. 26, 351.
	"	2.150, 21°	W. Fresenius. Z. K. M. 3, 42.
	"	2.160, 20°	
s oligoclase	$Al_5\,Sr\,Na_3\,Si_{11}\,O_{32}$	2.619	Fouqué and Lévy. C. R. 90, 622.
s labradorite	$Al_7\,Sr_3\,Na\,Si_9\,O_{32}$	2.862	" "
s anorthite	$Al_2\,Sr\,(Si\,O_4)_2$	3.043	" "

NAME.	FORMULA.	SP. GRAVITY.	AUTHO…
Barium oligoclase	$Al_5 Ba Na_3 Si_{11} O_{32}$	2.906	Fouqué an… C. R. 90, …
Barium labradorite	$Al_7 Ba_3 Na Si_9 O_{32}$	3.333	"
Barium anorthite	$Al_2 Ba (Si O_4)_2$	3.578	"
Harmotome	$Al_2 Ba H_{10} Si_5 O_{19}$	2.392	Mohs. See …
"	"	2.44—2.45	Dana's Mi…
"	"	2.447	Damour. … Min.
"	"	2.402, 21°	W. Fresen… M. 8, 42.
Lead oligoclase	$Al_5 Pb Na_3 Si_{11} O_{32}$	3.196	Fouqué an… C. R. 90, …
Lead labradorite	$Al_7 Pb_3 Na Si_9 O_{32}$	3.609	"
Lead anorthite	$Al_2 Pb (Si O_4)_2$	4.093	"
Euclase	$Al Gl H Si O_5$	3.036	Mallet. J. …
"	"	3.097	Des Cloizea… na's Min.
"	"	3.096—3.103	Kokscharo… na's Min
"	"	3.087	Guyot. Z. … 250.
Beryl	$Al_2 Gl_3 (Si O_3)_6$ or	2.813	Mallet. J. …
"	$Al_4 Gl_5 H_2 Si_{11} O_{34}$	2.686	Haughton. … 720.
"	"	2.650	Petersen. J…
"	"	2.706	Penfield a… per. A. … 32, 111.
"	"	2.681—2.725	Kokscharo… Min.
" Emerald	"	2.614	Boussingau… 1216.
" "	"	2.710—2.759	Kammerer. … Min.
Iolite	$Al_4 Mg_2 Si_5 O_{18}$	2.605	Kokscharo… 767.
"	"	2.6699, 16°	Schachtel. … 7, 594.
"	"	2.6708, 18°	Jost. Z. … 594.
Ripidolite	$Al_2 Mg_5 Si_3 O_{14} . 4H_2O$	2.774	Rose. Da…
"	"	2.603	Hermann. … Min.
"	"	2.673	Marignac. … Min.
"	"	2.714	Blake. Da…
Arctolite	$Al_2 Mg Ca H_2 (Si O_4)_3$	3.08	Blomstrand
Manganese garnet. Artificial.	$Al_2 Mn_3 (Si O_4)_3$	4.05, 11°	Gorgeu. C… 1303.
Karpholite	$Al_2 Mn H_4 Si_2 O_{10}$	2.935	Breithaupt. … Min.
"	"	2.876	Koninck. … 4, 222.
Almandite	$Al_2 Fe''_3 (Si O_4)_3$	3.[illegible]—4.[illegible]	Wachtmeis… na's Min.
"	"	[illegible]	Mallet. Da…
"	"	[illegible]	Websky …
"	"	[illegible]	Heddle.

Name.	Formula.	Sp. Gravity.	Authority.
ite	$Al_2 Fe'' Mn_2 (Si O_4)_3$	4.006	Haidinger. J. 7, 826.
te	$Al_2 Fe'' H_2 Si_3 O_{11}$	3.26	Damour. Z. K. M. 4, 413.
d	$Al_2 Fe'' H_2 Si O_7$	3.52	Smith. J. 3, 741.
	"	3.513	Hunt. J. 14, 1011.
	"	3.588	Tschermak and Sipöcz. Z. K. M. 3, 508.
ite	$Cr_2 Ca_3 (Si O_4)_3$	3.5146	Erdmann. B. J. 28, 291.
	"	3.41—3.52	Dana's Mineralogy.
	$Fe''' Na (Si O_3)_2$	3.536—3.548	Breithaupt. See Böttger.
	"	3.530	Rammelsberg. J. 11, 695.
	"	3.520	Doelter. Z. K. M. 4, 92.
ite	$Fe'''_2 Ca_3 (Si O_4)_3$	3.85	Damour. J. 9, 848.
	"	3.796—3.798	Kokscharow. J. 12, 782.
	"	3.797	Fellenberg. J. 20, 984.
	"	3.740	Dana. Z. K. M. 2, 311.
Demantoid	"	3.828	Rammelsberg. Z. K. M. 3, 103.
	"	3.81, 15°	Cossa. Z. K. M. 5, 602.
lite	$Fe'''_2 Fe''_3 Na_2 H_4 (Si O_3)_9$.	3.200	Stromeyer and Hausmann. P. A. 23, 153.
	"	3.2	Chester. A. J. S. (3), 34, 108.
	$Fe''' Fe''_2 Ca H Si_2 O_9$.	3.711	Tobler. J. 9, 851.
	"	4.023	Städeler. J. 19, 984.
	"	4.05	Lorenzen. J. 36, 1879.
ite. (Owenite)	$Fe'''_4 Fe''_4 Si_3 O_{16}$. $5 H_2 O$.	3.197, 20°	Genth. A. J. S. (2), 16, 167.
"	"	3.191	Smith. A. J. S. (2), 18, 376.
	"	3.177	Zepharovich. Z. K. M. 1, 371.
	$Ca Ti Si O_5$	3.49—3.51	Hunt. J. 6, 837.
	"	3.44	Fuchs. Dana's Min.
	"	3.535	Rose. " "
Greenovite	"	3.547	Hintze. Z. K. M. 2, 310.
Artificial	"	3.45	Hautefeuille. J. 17, 216.
ite	"	3.487	Guiscardi. J. 11, 718.
...um potassium silicate	$Zr K_2 Si_2 O_7$	2.79	Mellis. Göttingen Doct. Diss., 1870.
...sodium silicate	$Zr_8 Na_2 Si O_{19}$. $11 H_2O$	3.53	" "
...te	$Ca Sn Si O_5$	4.34	Bourgeois. C. R. 104, 233.

3d. Boro-, Fluo-, and Other Mixed Silicates.

Name.		Formula.	Sp. Gravity.	Author[ity]
Danburite		$Ca B_2 Si_2 O_8$	2.986	Brush and D[ana]
"		"	3.021	K. M. 5, 1
"		"	2.986	Bodewig. Z
"		"	2.988	7, 297.
Datolite		$Ca H B Si O_5$	2.989	Mohs. See
"		"	2.9911	Breithaupt. Böttger.
"		"	2.983	Whitney. J.
"		"	2.987—3.014	Tschermak. 778.
"		"	2.988	Smith. J. 2
Homilite		$Ca_2 Fe B_2 Si_2 O_{10}$	3.28	Paikull. Z. 1, 385.
Howlite		$Ca_2 H_5 B_5 Si O_{14}$	2.59	Penfield and A. J. S. 221.
Axinite		$Al_3 (Ca Fe Mn)_4 H_2 B Si_5 O_{21}$.	3.271	Mohs. See
Tourmaline.	Colorless	$Al B O_2 (Si O_4)_2 R'_6$	3.07—3.085	Riggs. A. J 35, 35.
"	Red	"	2.998—3.082	Rammelsber[g] 744.
"	"	"	2.997—3.028	Riggs. A. J 35, 35.
"	Green	"	3.069—3.112	Rammelsber[g] 744.
"	Brown	"	3.035—3.068	"
"	Black	"	3.205—3.243	"
"	"	"	3.08—3.20	Riggs. A. J 35, 35.
Apophyllite		$Ca_4 K H_7 (Si O_3)_8 F. 4 H_2 O$	2.335	Mohs. See
"		"	2.305	Jackson. J
"		"	2.37	Smith. J.
Leucophane		[illegible]	2.?64	Rammelsber[g] 867.
"		"	2.974	Erdmann. 168.
Melinophane		[illegible]	3.0?	Scheerer. J
"		"	[illegible]	Rammelsber[g] 867.
Topaz		[illegible]	[illegible]	Breithaupt. Böttger.
"			[illegible]	K[okscharow] 867.
"			[illegible]	Rammelsber[g] [illegible]
"			[illegible]	Church. Ge[ol.] [illegible]
			[illegible]	[illegible]
[illegible]		[illegible]	[illegible]	[illegible]

[N]AME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
----------	$Al_2 K Li Si_3 O_9 F_2$ --	2.838 --------	Scharizer. Z. K. M. 12, 15.
e----------	$Al_2 Mg_6 H K Si_5 O_{18} F_2$	2.78—2.85----	Dana's Mineralogy.
----------	" --	2.81 ---------	Kenngott. J. 15, 742.
----------	" --	2.959, 16° ----	Berwerth. Z. K. M. 2, 521.
----------	" --	2.742—2.867--	Tschermak. Z. K. M. 3, 127.
:hlorosilicate----	$Ca_3 Si O_4 Cl_2$--------	2.77 ---------	Le Chatelier. C. R. 97, 1510.
----------	$Al_4 Na_5 (Si O_4)_4 Cl$--	2.401 --------	v. Rath. Dana's Min.
----------	" --	2.31 ---------	Lorenzen. J. 36, 1884.
----------	" --	2.3405, 21° ---	Bamberger. Z. K. M. 5, 584.
----------	" --	2.294—2.314--	Kimball. J. 13, 775.
----------	$Al_3 Na_4 Si_9 O_{24} Cl$---	2.626, 19° ----	v. Rath. Z. G. S. 18, 635.
lite----------	$Mn_5 Fe''_3 H_{14} (Si O_4)_8 Cl_2$.	3.168—3.174--	Lang. J. P. C. 83, 424.
----------	" --	3.081 --------	Hisinger. Dana's Min.
----------	$Gl_3 Mn_4 (Si O_4)_3 S$ --	4.306 --------	Lewis. Z. K. M. 7, 425.
----------	" --	3.23—3.37----	Kokscharow. J. 22, 1228.
----------	$Gl_3 Fe_3 Zn (Si O_4)_3 S$-	3.427 --------	Cooke. A. J. S. (2), 42, 73.
----------	$Al_4 Na_6 (Si O_4)_4 S O_4$-	2.25—2.4-----	Dana's Mineralogy.
----------	" --	2.279—2.399--	v. Rath. Z. G. S. 16, 86.
silicate and sul-	$Ca_{18} Al_2 S_2 O_{35}$. 2Ca S	3.034 --------	Rammelsberg. J. P. C. (2), 35, 98.
ite ----------	$Ca_3 Si O_3 S O_4 C O_3$. 14 $H_2 O$.	1.877, 19° ----	Lindström. J. 33, 1484.
silicophosphate--	$Ca_5 Si O_4 (P O_4)_2$----	3.042 --------	Carnot and Richard. B. S. M. 6, 241.

XLI. TITANATES AND STANNATES.

NAME.	FORMULA.	SP. GRAVITY	AUTHORITY.
[illegible] titanate. Artifi-	$Ca Ti O_3$ ----------	4.10 --------	Ebelmen.
" " --	" ----------	4.00 --------	Hautefeuille. J. 17, 217.
" Perof-skite.	" ----------	4.017 --------	Rose. B. J. 20, 210.
" " --	" ----------	4.038 --------	Damour. J. 8, 960.
" " --	" ----------	3.974, 20° ----	Brun. Z. K. M. 7, 389.
	$Sr_2 Ti_3 O_8$ ----------	5.1 ---------	Bourgeois. C. R. 108, 141.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Barium titanate	$Ba_2 Ti_3 O_8$	5.91	Bourgeois. C. R. 103, 141.
Magnesium titanate	$Mg Ti O_3$	3.91	Hautefeuille. J. 17, 217.
Magnesium orthotitanate	$Mg_2 Ti O_4$	3.52	" "
Ilmenite	$Fe Ti O_3$	4.727	Marignac. B. J. 28, 372.
Iron orthotitanate	$Fe_2 Ti O_4$	4.37	Hautefeuille. J. 17, 217.
Zinc titanate	$Zn Ti_3 O_7$	4.92, 15°	Levy. C. R. 105, 380.
Potassium stannate	$K_2 Sn O_3 . 3 H_2 O$	3.197	Ordway. J. 18, 240

XLII. CYANOGEN COMPOUNDS.*

1st. General Division.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Cyanogen. Liquefied	$C_2 N_2$	.866, 17°.2	Faraday. P.T. 1845, 155.
Hydrocyanic acid	H C N	.7058, 7°	Gay Lussac. Ann. 95, 136.
" "	"	.6969, 18°	
" "	"	.710, 6°	Trautwein.
" "	"	.706, 2°.8	Cooper. P. A. 47, 527.
Cyanic acid	H C N O	1.1558, —20°	Troost and Hautefeuille. J. 21, 314
" "	"	1.140, 0°	
Cyanuric acid	$H_3 C_3 N_3 O_3$	1.768, 0°	Troost and Hautefeuille. J. 22, 99
" "	"	2.500, 19°	
" "	"	2.228, 24°	
" "	"	1.725, 48°	
" "	"	1.722	Schröder. Ber. 13, 1070.
" "	"	1.735	
Cyamelide	$(H C N O)_n$	1.974, 0°	Troost and Hautefeuille. J. 22, 99
"	"	1.774, 24°	
Hydrosulphocyanic acid	H C N S	1.0013, 10°	Clasen.
" "	"	1.022	Porrett. P.T. 1814, 548.
" "	"	1.0082	Meitzendorff. P. A. 56, 63.
Tricyanogen trichloride	$C_3 N_3 Cl_3$	1.32	Serullas. Ann. (2) 38, 370.
Cyanogen iodide	C N I	1.85	Weltzien's "Zusammenstellung.

* Exclusive of organic cyanides, or compounds containing organic radicles.

2d. Cyanides, Cyanates, and Sulphocyanides.

Name.	Formula.	Sp. Gravity.	Authority.
ssium cyanide	K C N	1.52, 12°	Bödeker. B. D. Z.
er cyanide	Ag C N	3.943, 11°	Giesecke. "
cury cyanide	Hg (C N)$_2$	3.77, 13°	Bödeker. "
" "	"	4.0036, 14°.2	Clarke. A. J. S. (3), 16, 201.
" "	"	4.0262, 12°	Creighton. F. W. C.
" "	"	4.0026, 22°.2	Wittmann. "
" "	"	3.990	Schröder. Ber. 13, 1070.
" "	"	4.011	
cury oxycyanide	Hg O. Hg (C N)$_2$	4.419 } 28°.2	Clarke. A. J. S. (3), 16, 201.
" "	"	4.428 } 28°.2	
" "	"	4.437, 19°.2	Creighton. F. W. C.
cury chlorocyanide	Hg Cl (C N)	4.514, 26°	Wittmann. "
" "	"	4.531, 21°.7	
cury potassium cyanide.	K$_2$ Hg (C N)$_4$	2.4470, 21°.2	Creighton. "
" " "	"	2.4551, 24°	
" " "	"	2.4620, 21°.5	
ssium chromocyanide	K$_4$ Cr (C N)$_6$	1.71	Moissan. Ann. (6), 4, 138.
ssium manganicyanide.	K$_3$ Mn (C N)$_6$	1.821	Topsoë. B. S. C. 19, 246.
ium ferrocyanide	Na$_4$Fe(CN)$_6$. 12H$_2$O	1.458	Bunsen.
ssium ferrocyanide	K$_4$ Fe (C N)$_6$. 3 H$_2$ O	1.83	Watts' Dictionary.
" "	"	1.86	Schiff. J. 12, 41.
" "	"	2.052	Buignet. J. 14, 15.
llium ferrocyanide	Tl$_4$ Fe (C N)$_6$. 2 H$_2$ O	4.641	Lamy and Des Cloizeaux. Nature 1, 142.
onium ferrocyanide with ammonium chloride.	Am$_4$ Fe (C N)$_6$. 2 Am Cl. 3 H$_2$ O.	1.490	Topsoë. C. C. 4, 76.
ssium ferricyanide	K$_3$ Fe Cy$_6$	1.8004	Schabus. J. 8, 359.
" "	"	1.845	Wallace. J. 7, 378.
" "	"	1.849	Schiff. J. 12, 41.
" "	"	1.817	Buignet. J. 14, 15.
" "	"	1.849, 15°.3	Schröder. Dm. 1873.
" "	"	1.854, 15°.3	
" "	"	1.855, 15°	
" "	"	1.861, 15°	
ver ammonio-ferricyanide.	4 Ag Fe (C N)$_6$. 6 N H$_3$. H$_2$ O.	2.42 } 14°.2	Gintl. J. 22, 321.
"		2.47 } 14°.2	
dium nitroprusside	Na$_4$ Fe$_2$ (C N)$_{10}$ (NO)$_2$. 4 H$_2$ O.	1.710	Schröder. Dm. 1873.
" "		1.716	
" "	"	1.6869, 25°	Dudley. F. W. C.
" "	"	1.713	Schröder. Ber. 13, 1070.
" "	"	1.731	
ssium nickel cyanide	K$_2$ Ni (C N)$_4$. H$_2$ O.	1.871, 14°.5	Dudley. F. W. C.
" " "	"	1.875, 11	
ssium cobalticyanide	K$_3$ Co (C N)$_6$	1.906, 11°	Bödeker. B. D. Z.
" "	"	1.913	Topsoë. C. C. 4, 76.
platinocyanide	K$_2$Pt(CN)$_4$. 3H$_2$O	2.4548, 16°	Dudley. F. W. C.
"	"	2.5241, 18°	
yanide	BaPt (C N)$_4$	3.054	Schabus. J. 8, 360.

NAME.	FORMULA.	SP. GRAVITY.	AUTHO
Samarium platinocyanide	$Sm_2Pt_3(CN)_{12}.\ 18H_2O$	2.748 } 20°.8	Cleve. U.N
" "	"	2.745 } 20°.8	
Thorium platinocyanide	$ThPt_2(CN)_8.\ 16H_2O$	2.460	Topsoë. B. 118.
Potassium cyanate	K C N O	2.0475, 16°	Mendius.
" "	"	2.056, 4°	Schröder. 561.
Silver cyanate	Ag C N O	4.004, 16°	Mendius.
" "	"	3.998	Schröder. 1070.
Potassium sulphocyanide	K C N S	1.866 } 14°	Bödeker.
" "	"	1.906 } 14°	
" "	"	1.891	Schröder. 2215.
Ammonium sulphocyanide.	Am C N S	1.299 } 13°	Dudley. F
" "	"	1.316 } 13°	
" "	"	1.316	Schröder. 2215.
Lead sulphocyanide	$Pb(C\ N\ S)_2$	3.82	Schabus.
Phosphorus sulphocyanide	$P(C\ N\ S)_3$	1.625, 18°	Miquel. J 32, 872.
Potassium chromium sulphocyanide.	$K_6Cr(CNS)_{12}.\ 8H_2O$	1.7051, 17°.5	Dudley. F
" "	"	1.7107, 16°	
Potassium platinsulphocyanide.	$K_2Pt(C\ N\ S)_6$	2.342, 18°	"
" "	"	2.370, 19°	
Potassium platinselenio-cyanide.	$K_2Pt(C\ N\ Se)_6$	3.377, 10°.2	"
" "	"	3.378, 12°.5	
Titanium nitrocyanide	$Ti(C\ N)_2.\ 3\ Ti_3N_2$	5.30	Wollaston. 1823, 17.
" "	"	5.28001	Karsten. S 65, 394.
Samarium sulphocyanide with mercuric cyanide.	$Sm(C\ N\ S)_3.\ 3\ Hg(CN)_2.\ 12\ H_2O$	2.742, 18°	Cleve. U.N.
		2.749, 18°.4	

XLIII. MISCELLANEOUS INORGANIC COMPOUND

NAME.	FORMULA.	SP. GRAVITY.	AUTHOR
[illegible]	P_3N_5C[illegible]	[illegible]	Gladstone and Holmes. 148.
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	Heighway.
		[illegible]	[illegible] C.
[illegible]	[illegible]	[illegible]	H. S

Name.	Formula.	Sp. Gravity.	Authority.
n nitrato-sul-	$K_2 S O_4 . H N O_3$	2.38	Jacquelain. A. C. P. 32, 284.
n phosphato-sul-	$K_2 S O_4 . H_3 P O_4$	2.296	" "
	$4 Na_2 S O_4 . Na_2 C O_3$	2.562	Hidden. A. J. S. (3), 30, 185.
te	$Pb_2 C O_3 Cl_2$	6.305	Rammelsberg. P. A. 85, 141.
ite	$Pb_4 S O_4 (C O_3)_3$	6.550	Gadolin. J. 6, 846.
	"	6.526	Kokscharow. J. 6, 846.
te (Hamartite)	$(Ce\ La\ Di)(C O_3) F$	4.93	Nordenskiöld. J. 22, 1246.
	"	5.18–5.20	Allen and Comstock. A. J. S. (3), 19, 390.
	$(Ce\ La\ Di)_2 (C O_3)_4 . Ca F_2$	4.35	Bunsen. Dana's Min.
	"	4.317	Dufrenoy. Dana's Min.

XLIV. ALLOYS.*

Alloy.	Specific Gravity.	Authority.
AND POTASSIUM.		
	.8993 0°, solid	Hagen. P. A. (2), 19, 436.
	.8994 0°, solid	
	.8905, 4°.5, fluid	
.ND CALCIUM.†		
	6.369	v. Rath. Z. C. 12, 665.
	6.3726	
S OF MERCURY. MALGAMS.		
	11.304	Calvert and Johnson. J. 12, 120.
	12.615	Croockewitt. J. 1, 393.
	11.93	" "
	12.284, 15°.7	Matthiessen. P. T. 1860, 177.
	11.979, 15°.9	" "
	12.49, 17°	Bauer. J. 24, 817.
	12.815, 15°.5	Matthiessen. P. T. 1860, 177.
	11.3816	Kupffer. Ann. (2), 40, 285.
	11.456, 11°.3	Holzmann. P. T. 1860, 177.

* ...only a moderate number of the many determinations which have been made ...gravity of alloys. Only those alloys have been admitted which allow of rela... formulæ. Some of them are doubtless true chemical compounds, but in ...ely represent proportionate composition.
† ...chell, A. C. J. 10, 70.

Alloy.	Specific Gravity.	Authority.
ALLOYS OF MERCURY. AMALGAMS—continued.		
Hg Sn	10.3447	Kupffer. Ann. (2), 40, 2
"	10.369, 14°.2	Holzmann. P. T. 1860, 1
"	10.255	Calvert and Johnson. J.
$Hg\ Sn_2$	9.3185	Kupffer. Ann. (2), 40, 28
"	9.362, 9°.9	Holzmann. P. T. 1860, 1
"	9.314	Calvert and Johnson. J. 1
$Hg\ Sn_3$	8.8218	Kupffer. Ann. (2), 40, 28
"	8.805	Calvert and Johnson. J. 1
$Hg\ Sn_4$	8.510	"
$Hg\ Sn_5$	8.312	"
$Hg\ Sn_6$	8.151	"
Hg Bi	11.208	"
$Hg\ Bi_2$	10.698	"
"	10.45	Croockewitt. J. 1, 393.
$Hg\ Bi_3$	10.474	Calvert and Johnson. J.
$Hg\ Bi_4$	10.350	"
$Hg\ Bi_5$	10.240	"
$Hg_6\ Ag_{11}$. Native	12.703, 17°	Weiss. J. 36, 1819.
$Hg_2\ Au$	15.412	Croockewitt. J. 1, 393.
ALLOYS OF ALUMINUM.		
Al Zn	4.532	Hirzel. J. 11, 138.
$Al_6\ Sn$	3.583	" "
$Al_5\ Sn$	3.791	" "
$Al_4\ Sn$	4.025	" "
$Al_3\ Sn$	4.276	" "
$Al_2\ Sn$	4.744	" "
Al Sn	5.454	" "
$Al\ Sn_2$	6.264	" "
$Al\ Sn_3$	6.886	" "
$Al_2\ Cb$	4.45—4.52	Marignac. J. 21, 215.
$Al_3\ Ta$	7.02	Marignac. J. 21, 212.
Al Cr	4.9	Wöhler. J. 11, 160.
$Al_4\ W$	5.58	Michel. J. 13, 130.
$Al_3\ Mn$	3.402	Michel. J. 13, 131.
$Al_4\ Ni$	3.647	Michel. J. 13, 132.
$Al_{10}\ Cu$	[illegible]	Hirzel. J. 11, 138.
[illegible]	[illegible]	" "
[illegible]	[illegible]	" "
[illegible]	[illegible]	" "
[illegible]	[illegible]	" "
[illegible]	[illegible]	" "
[illegible]	[illegible]	" "
[illegible]	[illegible]	" "
[illegible]	[illegible]	" "
[illegible]	[illegible]	" "
[illegible]	[illegible]	" "
[illegible]	[illegible]	" "
[illegible]	[illegible]	" "
[illegible]	[illegible]	" "
[illegible]	[illegible]	" "
[illegible]	[illegible]	" "
[illegible]	[illegible]	[illegible] J. 11, 1[illegible]
[illegible]	[illegible]	" "
[illegible]	[illegible]	" "

ALLOY.	SPECIFIC GRAVITY.	AUTHORITY.
TIN AND ZINC.		
n	7.285	Croockewitt. J. 1, 394.
	7.274	Calvert and Johnson. J. 12, 120.
n	7.115	Croockewitt. J. 1, 394.
	7.262	Calvert and Johnson. J. 12, 120.
n_2	7.096	Croockewitt. J. 1, 394.
	7.188	Calvert and Johnson. J. 12, 120.
n_3	7.180	" "
n_4	7.155	" "
n_5	7.140	" "
n_{10}	7.135	" "
IN AND CADMIUM.		
Cd	7.434, 12°.7	Matthiessen. P. T. 1860, 177.
Cd	7.489, 15°	" "
Cd	7.690, 12°.9	" "
Cd	7.904, 18°.2	" "
Cd_2	8.189, 11°.1	" "
Cd_4	8.336, 14°.5	" "
Cd_6	8.482, 15°	" "
TIN AND LEAD.		
Pb	7.628, 19°.4	
	7.4849, 181°, s.	
	7.3513, 212°, l.	
	7.3209, 218°.7	
	7.3041, 249°.4	Vicentini and Omodei. Bei. 12, 178. Melting point, 181°.
	7.2726, 275°.8	
	7.2490, 304°.2	
	7.2294, 329°	
	7.2088, 354°.8	
Pb	7.9210	Kupffer. Ann. (2), 40, 285.
	7.927, 15°.2	Long. P. T. 1860, 177.
Pb	8.0279	Kupffer. Ann. (2), 40, 285.
	8.093	Calvert and Johnson. J. 12, 120.
	8.046	Riche. J. 15, 111.
Pb	8.1730	Kupffer. Ann. (2), 40, 285.
	7.850	Thomson. J. 1, 1040.
	8.188, 16°	Long. P. T. 1860, 177.
	8.196	Calvert and Johnson. J. 12, 120.
	8.2347	Pillichody. J. 14, 279.
	8.195	Riche. J. 15, 111.
	8.177, 16°.7	
	8.0735, 183°.3, s.	
	7.8393, 209°, l.	
	7.8090, 240°.4	
	7.7917, 260°.4	Vicentini and Omodei. Bei. 12, 178. Melting point, 183°.3.
	7.7586, 295°.5	
	7.7323, 324°.7	
	7.7082, 357°.6	
	8.291	Riche. J. 15, 111.
	8.3914	Kupffer. Ann. (2), 40, 285.
	8.549	Thomson. J. 1, 1040.
	9.025	Croockewitt. J. 1, 394.
	418	Calvert and Johnson. J. 12, 120.

Alloy.	Specific Gravity.	Authority.
TIN AND LEAD—contin'd.		
Sn_3Pb	8.4087	Pillichody. J. 14, 279.
"	8.414	Riche. J. 15, 111.
"	8.400, 17°	
"	8.2949, 182°.9, s.	
"	8.0821, 182°.9, l.	
"	8.0755, 189°.7	
"	8.0431, 222°.9	
"	8.0150, 250°	Vicentini and Omodei. 178. Melting point, 1
"	7.9896, 275°.9	
"	7.9695, 296°.8	
"	7.9446, 323°.9	
"	7.9212, 349°.5	
Sn_5Pb_2	8.565	Riche. J. 15, 111.
Sn_2Pb	8.7454	Kupffer. Ann. (2), 40,
"	8.777, 18°.3	Regnault. P. A. 53, 67
"	8.688	Thomson. J. 1, 1040.
"	8.779, 17°.2	Long. P. T. 1860, 177.
"	8.774	Calvert and Johnson. J
"	8.7257	Pillichody. J. 14, 279.
"	8.766	Riche. J. 15, 111.
"	8.745, 15°.2	
"	8.6298, 182°.3, s.	
"	8.4509, 182°.3, l.	
"	8.4381, 189°	
"	8.4038, 207°	
"	8.3532, 242°.5	Vicentini and Omodei. 178. Melting point, 1
"	8.3204, 272°.9	
"	8.2920, 303°.1	
"	8.2688, 325°.5	
"	8.2448, 351°.5	
Sn_3Pb_2	9.0377	Pillichody. J. 14, 279.
"	9.046	Riche. J. 15, 111.
Sn_4Pb_3	9.2778, 15°	Pohl. J. 3, 324.
$SnPb$	9.4263	Kupffer. Ann. (2), 40,
"	9.387, 18°.3	Regnault. P. A. 53, 67.
"	9.288	Thomson. J. 1, 1040.
"	9.394	Croockewitt. J. 1, 394.
"	9.460, 15°.5	Long. P. T. 1860, 177.
"	9.458	Calvert and Johnson. J.
"	9.4330	Pillichody. J. 14, 279.
"	9.451	Riche. J. 15, 111.
"	9.422, [illegible]	
"	[illegible], 181°.8, s.	
"	[illegible], 181°.8, l.	
"	[illegible]	
"	[illegible]	
"	[illegible]	
"	[illegible]	Vicentini and Omodei. 178. Melting point, 1
"	[illegible]	
"	[illegible]	
"	[illegible]	
	[illegible]	
	[illegible]	
[illegible]	[illegible]	Pohl. J. 3, [illegible]
[illegible]	[illegible]	Pillichody. J.
[illegible]	[illegible]	Kupffer. A

Alloy.	Specific Gravity.	Authority.
Tin and lead—contin'd.		
$Sn\,Pb_2$	9.966	Croockewitt. J. 1, 394.
"	10.080, 14°.8	Long. P. T. 1860, 177.
"	10.105	Calvert and Johnson. J. 12, 120.
"	10.0520	Pillichody. J. 14, 279.
"	10.110	Riche. J. 15, 111.
$Sn\,Pb_3$	10.3868	Kupffer. Ann. (2), 40, 285.
"	10.421	Calvert and Johnson. J. 12, 120.
"	10.3311	Pillichody. J. 14, 279.
"	10.419	Riche. J. 15, 111.
$Sn\,Pb_4$	10.5551	Kupffer. Ann. (2), 40 285.
"	10.590, 14°.8	Long. P. T. 1860, 177.
"	10.587	Calvert and Johnson. J. 12, 120.
"	10.5957	Pillichody. J. 14, 279.
$Sn\,Pb_5$	10.751	Calvert and Johnson. J. 12, 120.
$Sn\,Pb_6$	10.815, 15°.6	Long. P. T. 1860, 177.

Alloy.	Specific Gravity.	Authority.
Lead and cadmium.		
$Cd_6\,Pb$	9.160, 13°.7	Holzmann. P. T. 1860, 177.
$Cd_4\,Pb$	9.353, 12°	" "
$Cd_2\,Pb$	9.755, 14°.7	" "
$Cd\,Pb$	10.246, 11°.7	" "
$Cd\,Pb_2$	10.656, 13°.4	" "
$Cd\,Pb_4$	10.950, 9°.2	" "
$Cd\,Pb_6$	11.044, 14°.8	" "

Alloy.	Specific Gravity.	Authority.
Antimony and tin.		
$Sb_{12}\,Sn$	6.739, 16°.2	Long. P. T. 1860, 177.
$Sb_8\,Sn$	6.747, 13.°4	" "
$Sb_4\,Sn$	6.781, 13°.5	" "
$Sb_2\,Sn$	6.844, 18°.8	" "
$Sb\,Sn$	6.929, 15°.8	" "
$Sb\,Sn_2$	7.023, 15°.8	" "
$Sb\,Sn_3$	7.100, 10°.6	" "
$Sb\,Sn_5$	7.140, 19°	" "
$Sb\,Sn_{10}$	7.208, 18°.5	" "
$Sb\,Sn_{20}$	7.276, 19°.4	" "
$Sb\,Sn_{50}$	7.279, 20°	" "
$Sb\,Sn_{100}$	7.284, 20°.2	" "

Alloy.	Specific Gravity.	Authority.
Antimony and lead.		
$Sb_5\,Pb$	7.214	Riche. J. 15, 111.
$Sb_4\,Pb$	7.361	" "
$Sb_3\,Pb$	7.432	Calvert and Johnson. J. 12, 120.
$Sb_4\,Pb$	7.525	" "
"	7.622	Riche. J. 15, 111.
$Sb_2\,Pb$	7.830	Calvert and Johnson. J. 12, 120.
$Sb_2\,Pb$	8.330	" "
"	8.201, 13°.7	Matthiessen. P. T. 1860, 177.
"	8.233	Riche. J. 15, 111.
$Sb\,Pb$	8.953	Calvert and Johnson. J. 12, 120
"	8.989, 11°.7	Matthiessen. P. T. 1860, 177.
"	8.999	Riche. J. 15, 111.
Pb_2	9.502	" "

ALLOY.	SPECIFIC GRAVITY.	AUTHORITY.
ANTIMONY AND LEAD—*continued.*		
$SbPb_2$	9.723	Calvert and Johnson. J. 1[illegible]
"	9.811, 14°.3	Matthiessen. P. T. 1860, 1[illegible]
"	9.817	Riche. J. 15, 111.
Sb_2Pb_5	10.040	" "
$SbPb_3$	10.136	Calvert and Johnson. J. 1[illegible]
"	10.144, 15°.4	Matthiessen. P. T. 1860, 1[illegible]
"	10.211	Riche. J. 15, 111.
Sb_2Pb_7	10.344	" "
$SbPb_4$	10.387	Calvert and Johnson. J. 1[illegible]
"	10.455	Riche. J. 15, 111.
Sb_2Pb_9	10.541	" "
$SbPb_5$	10.556	Calvert and Johnson. J. 1[illegible]
"	10.586, 19°.3	Matthiessen. P. T. 1860, 1[illegible]
"	10.615	Riche. J. 15, 111.
Sb_2Pb_{11}	10.673	" "
$SbPb_6$	10.722	" "
Sb_2Pb_{13}	10.764	" "
$SbPb_7$	10.802	" "
$SbPb_{10}$	10.930, 19°.9	Matthiessen. P. T. 1860, 1[illegible]
$SbPb_{18}$	11.194, 20°.5	" "
BISMUTH AND ZINC.		
$BiZn$	9.046	Calvert and Johnson. J. 12[illegible]
BISMUTH AND CADMIUM.		
$Bi_{[illegible]}Cd$	9.766, 15°.4	Matthiessen. P. T. 1860, 1[illegible]
$Bi_{[illegible]}Cd$	9.787, 14°.7	" "
$Bi_{[illegible]}Cd$	9.669, 14°.8	" "
$Bi_{[illegible]}Cd$	9.554, 13°.4	" "
$BiCd$	9.388, 15°	" "
$BiCd_{[illegible]}$	9.1[illegible], 1[illegible]°.5	" "
$BiCd_{[illegible]}$	9.079, 18°.1	" "
BISMUTH AND TIN.		
[illegible]	[illegible]	Carty. P. T. 1860, 177.
[illegible]	[illegible]	" "
[illegible]	[illegible]	" "
[illegible]	[illegible]	" "
[illegible]	[illegible]	" "
[illegible]	[illegible]	" "
[illegible]	[illegible]	" "
[illegible]	[illegible]	" "
[illegible]	[illegible]	" "
	[illegible]	Riche. J. 15, 112.
[illegible]	[illegible]	Carty. P. T. 1860, 177.
	[illegible]	Riche. J. 15, 111.
[illegible]	[illegible]	[illegible] P. A. 53, 67.
	[illegible]	Carty. P. T. 1860, 177.
	[illegible]	Riche. J. 15, 112.
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible] P. A. [illegible]
	[illegible]	Carty. P. T. [illegible]

Alloy.	Specific Gravity.	Authority.
H AND TIN—ontinued.		
	8.327	Riche. J. 15, 112.
	8.199	" "
	8.112, 14°.2	Carty. P. T. 1860, 177.
	8.097	Riche. J. 15, 112.
	8.017	" "
	7.943, 20°	Carty. P. T. 1860, 177.
	7.438, 19°.9	" "
TH AND LEAD.		
	9.844, 21°.7	Carty. P. T. 1860, 177.
	9.845, 21°.6	" "
	9.850, 21°.3	" "
	9.887, 20°.6	" "
	9.893, 19°.5	" "
	9.934, 21°.1	" "
	9.973, 15°	" "
	10.048, 10°.7	" "
	8.6	E. Wiedemann. P. A. (2), 20, 240.
	10.285, 12°.5	Carty. P. T. 1860, 177.
	10.282	Riche. J. 15, 111.
	9.73	E. Wiedemann. P. A. (2), 20, 289.
	10.588, 14°	Carty. P. T. 1860, 177.
	10.519	Riche. J. 15, 111.
	10.96	E. Wiedemann. P. A. (2), 20, 289.
	10.956, 14°.9	Carty. P. T. 1860, 177.
	10.981	Riche. J. 15, 111.
	11.03	E. Wiedemann. P. A. (2), 20, 287.
	11.038	Riche. J. 15, 111.
	11.108	" "
	11.166	" "
	11.141, 12°.7	Carty. P. T. 1860, 177.
	11.194	Riche. J. 15, 111.
	11.4	E. Wiedemann. P. A. (2), 20, 286.
	11.209	Riche. J. 15, 111.
	11.161, 14°.8	Carty. P. T. 1860, 177.
	11.225	Riche. J. 15, 111.
	11.235	" "
	11.188, 20°.8	Carty. P. T. 1860, 177.
	11.196, 20°.2	" "
	11.280, 22°.5	" "
	11.331, 23°	" "
AND ANTIMONY.		
	9.435, 9°.4	Holzmann. P. T. 1860, 177.
	9.369	Calvert and Johnson. J. 12, 120.
	9.276	" "
	9.277, 12°.1	Holzmann. P. T. 1860, 177.
	9.095	Calvert and Johnson. J. 12, 120.
	8.859	" "
	8.886, 14°	Holzmann. P. T. 1860, 177.
	8.864	Calvert and Johnson. J. 12, 120.
	8.892, 11°	Holzmann. P. T. 1860, 177.
	7.829	Calvert and Johnson. J. 12, 120.

ALLOY.	SPECIFIC GRAVITY.	AUTHORITY.
BISMUTH AND ANTIMONY —continued.		
$Bi\ Sb_2$	7.864, 9°.4	Holzmann. P. T. 1860,
$Bi\ Sb_3$	7.561	Calvert and Johnson. J
$Bi\ Sb_4$	7.870	"
$Bi\ Sb_6$	7.271	"
IRON AND TIN.		
$Fe\ Sn_6$. Cryst. furnace product.	7.534	Rammelsberg.
$Fe\ Sn_2$	7.446	Noellner. J. 13, 188.
$Fe_2\ Sn$	8.733	Lassaigne.
IRON AND NICKEL.		
Awaruite. $Ni_2\ Fe$	8.1	Ulrich. N. J. 1888, 209.
COPPER AND ZINC.*		
$Cu_{10}\ Zn$	8.605	Mallet. D. J. 85, 378.
$Cu_9\ Zn$	8.607	" "
$Cu_8\ Zn$	8.633	" "
$Cu_7\ Zn$	8.587	" "
$Cu_6\ Zn$	8.591	" "
$Cu_5\ Zn$	8.415	" "
"	8.673	Calvert and Johnson. J.
$Cu_4\ Zn$	8.448	Mallet. D. J. 85, 378.
"	8.650	Calvert and Johnson. J.
$Cu_3\ Zn$	8.397	Mallet. D. J. 85, 378.
"	8.576	Calvert and Johnson. J.
$Cu_2\ Zn$	8.299	Mallet. D. J. 85, 378.
"	8.392	Crookewitt. J. 1, 394.
"	8.488	Calvert and Johnson. J.
$Cu_3\ Zn_2$	8.224	Crookewitt. J. 1, 394.
Cu Zn	8.230	Mallet. D. J. 85, 378.
"	[illegible]	Calvert and Johnson. J.
Cu Zn [illegible]	[illegible]	Crookewitt. J. 1, 394.
Cu Zn [illegible]	[illegible]	Mallet. D. J. 85, 378.
"	[illegible]	Calvert and Johnson. J.
[illegible]	[illegible]	Mallet. D. J. 85, 378.
[illegible]	[illegible]	" "
[illegible]	[illegible]	" "
[illegible]	[illegible]	" "
[illegible]	[illegible]	" "
[illegible]	[illegible]	" "
[illegible]	[illegible]	" "
[illegible]	[illegible]	" "
"	[illegible]	Calvert and Johnson. J.
[illegible]	[illegible]	Mallet. D. J. 85, 378.
"	[illegible]	Calvert and Johnson. J.
[illegible]	[illegible]	Mallet. D. J. 85, 378.
"	[illegible]	Calvert and Johnson. J.

* [illegible] and other [illegible]

ALLOY.	SPECIFIC GRAVITY.	AUTHORITY.
PPER AND TIN.		
n	8.564	Thurston's Report, 295.
Sn	8.649	" " "
Sn	8.820	Calvert and Johnson. J. 12, 120.
Sn	8.694	Thurston's Report, 295.
Sn	8.793	Calvert and Johnson. J. 12, 120.
Sn	8.825	" "
	8.84	Riche. J. 21, 270.
	8.80	Riche. J. 23, 1100.
Sn	8.681	Thurston's Report, 295.
Sn	8.561	Mallet. D. J. 85, 378.
	8.832	Calvert and Johnson. J. 12, 120.
	8.87	Riche. J. 21, 270
	8.88	Riche. J. 23, 1100.
Sn	8.462	Mallet. D. J. 85, 378.
Sn	8.459	" "
	8.84	Riche. J. 21, 270.
	8.86	Riche. J. 23, 1100.
Sn	8.728	Mallet. D. J. 85, 378.
	8.72	Riche. J. 21, 270.
	8.90	Riche. J. 23, 1100.
Sn	8.750	Mallet. D. J. 85, 378.
	8.65	Riche. J. 21, 270.
	8.91	Riche. J. 23, 1100.
	8.565	Thurston's Report, 295.
Sn	8.575	Mallet. D. J. 85, 378.
	8.965	Calvert and Johnson. J. 12, 120.
	8.62	Riche. J. 21, 270.
	8.87	Riche. J. 23, 1100.
Sn	8.400	Mallet. D. J. 85, 378.
	8.948	Calvert and Johnson. J. 12, 120.
	8.77	Riche. J. 21, 270.
	8.80	Riche. J. 23, 1100.
	8.938	Thurston's Report, 295.
Sn	8.539	Mallet. D. J. 85, 378.
	8.954	Calvert and Johnson. J. 12, 120.
	8.91	Riche. J. 21, 270.
	8.96	Riche. J. 23, 1100.
	8.970	Thurston's Report, 295.
Sn_5	8.682	" " "
Sn	8.416	Mallet. D. J. 85, 378.
	8.512	Croockewitt. J. 1, 394.
	8.533	Calvert and Johnson. J. 12, 120.
	8.15	Riche. J. 21, 270.
	8.57	Riche. J. 23, 1100.
	8.560	Thurston's Report, 295.
Sn_7	8.442	" " "
Sn_2	8.06	Riche. J. 21, 270.
	8.30	Riche. J. 23, 1100.
	8.312	Thurston's Report, 295.
Sn_3	8.302	" " "
[illegible]	8.182	" " "
	8.656	Mallet. D. J. 85, 378.
	8.072	Croockewitt. J. 1, 394.
	7.992	Calvert and Johnson. J. 12, 120.
	7.90	Riche. J. 21, 270.
	8.12	Riche. J. 23, 1100

ALLOY.	SPECIFIC GRAVITY.	AUTHORITY.
COPPER AND TIN—continued.		
$Cu\,Sn$	8.013	Thurston's Report, 295.
$Cu_3\,Sn_4$	7.948	" " "
$Cu_3\,Sn_5$	7.835	" " "
$Cu\,Sn_2$	7.387	Mallet. D. J. 85, 378.
" Cryst.	7.53	Miller. P. A. 120, 55.
"	7.738	Calvert and Johnson. J. 12, [illegible]
"	7.83	Riche. J. 21, 270.
"	7.74	Riche. J. 23, 1100.
"	7.770	Thurston's Report, 295.
$Cu_3\,Sn_7$. Furnace product.	6.994	Rammelsberg. P. A. 120, 54
$Cu_2\,Sn_5$	7.652	Croockewitt. J. 1,394.
$Cu\,Sn_3$	7.447	Mallet. D. J. 85, 378.
"	7.606	Calvert and Johnson. J. 12, 1
"	7.44	Riche. J. 21, 270.
"	7.53	Riche. J. 23, 1100.
"	7.657	Thurston's Report, 295.
$Cu\,Sn_4$	7.472	Mallet. D. J. 85, 378.
"	7.558	Calvert and Johnson. J. 12, 1
"	7.31	Riche. J. 21, 270.
"	7.50	Riche. J. 23, 1100.
"	7.552	Thurston's Report, 295.
$Cu\,Sn_5$	7.442	Mallet. D. J. 85, 378.
"	7.517	Calvert and Johnson. J. 12, 1
"	7.28	Riche. J. 21, 270.
"	7.52	Riche. J. 23, 1100.
"	7.487	Thurston's Report, 295.
$Cu\,Sn_{12}$	7.360	" " "
$Cu\,Sn_{48}$	7.305	" " "
$Cu\,Sn_{96}$	7.299	" " "
COPPER AND LEAD.		
$Cu\,Pb$	10.375	Croockewitt. J. 1, 394.
$Cu_2\,Pb_3$	10.753	" "
COPPER AND ANTIMONY		
$Cu_{11}\,Sb_4$	8.829	Laist and Norton. A. C. J. 10,
" Horsfordite	8.812	
$Cu_4\,Sb$	8.871	Kamenski.* P. M. (5), 17, 2
$Cu_4\,Sb$	8.[illegible]	" "
$Cu\,Sb$	7.[illegible]	Calvert and Johnson. J. 12, 1
COPPER AND BISMUTH		
[illegible]	[illegible]	Calvert and Johnson. J. 12, 1
SILVER AND TIN		
[illegible]	[illegible]	[illegible] P. T. 1860, 177.
[illegible]	[illegible]	"
[illegible]	[illegible]	"
[illegible]	[illegible]	"

* [illegible] alloys.

LLOY.	SPECIFIC GRAVITY.	AUTHORITY.
ND TIN—continued.		
	7.936, 19°.3	Holzmann. P. T. 1860, 177.
	7.551, 18°.8	" "
	7.666, 18°.4	" "
	7.421, 18°.6	" "
AND LEAD.		
	10.800, 18°.5	Matthiessen. P. T. 1860, 177.
	10.925, 18°.8	" "
	10.054, 12°.5	" "
	11.144, 18°.2	" "
	11.196, 21°	" "
	11.285, 22°.2	" "
	11.334, 20°.6	" "
AND COPPER.*		
	9.9045	Levol. J. 5, 768.
olid	9.9045	Roberts. C. N. 31, 148.
Iolten	9.0554	
AND TIN.		
	16.367, 15°.4	Holzmann. P. T. 1860, 177.
	14.244, 14°.2	" "
	11.838, 14°.6	" "
	10.794, 23°.6	" "
	10.168, 23°.7	" "
	9.715, 22°.4	" "
	9.405, 23°.7	" "
	8.931, 25°.6	" "
	8.470, 23°.1	" "
	8.118, 22°.4	" "
	7.801, 22°.8	" "
	7.441, 22°.9	" "
AND LEAD.		
	17.013, 14°.3	Matthiessen. P. T. 1860, 177.
	15.603, 14°.5	" "
	14.466, 14°.3	" "
	13.306, 22°.1	" "
	12.737, 21°.3	" "
	12.445, 21°.6	" "
	12.274, 19°.4	" "
	11.841, 23°.3	" "
ND BISMUTH.		
	14.844, 16°	Holzmann. P. T. 1860, 177.
	13.403, 16°.5	" "
	12.067, 16	" "
	11.025, 25°	" "

...sch. Beiblätter 2, 194, for sixteen Ag Cu alloys.

Alloy.	Specific Gravity.	Authority.
Gold and Bismuth—continued.		
$Au\ Bi_8$	10.452, 21°.4	Holzmann. P. T. 1860, 177.
$Au\ Bi_{20}$	10.076, 18°.7	" "
$Au\ Bi_{40}$	9.942, 21°.2	" "
$Au\ Bi_{90}$	9.872, 21°	" "
Gold and Copper.		
$Au_8\ Cu$	17.9840	Roberts. Bei. 2, 827.
$Au_3\ Cu$	17[illegible]653	" "
$Au_2\ Cu$	16.4832	" "
Gold and Silver.		
$Au_8\ Ag$	18.041, 13°.1	Matthiessen. P. T. 1860, 177
$Au_4\ Ag$	17.540, 12°.3	" "
$Au_2\ Ag$	16.354, 13°	" "
$Au\ Ag$	14.870, 13°	" "
$Au\ Ag_2$	13.482, 14°.3	" "
$Au\ Ag_4$	12.257, 14°.7	" "
$Au\ Ag_8$	11.760, 13°.1	" "
Palladium and Lead.		
$Pd_3\ Pb$	11.225	Bauer. J. 24, 317.
Platinum and Lead.		
$Pt\ Pb$	15.77	Bauer. Z. C. 14, 48.
Iridium and Osmium.		
Ir Os. Newjanskite	19.386—19.471	Berzelius. Dana's Min.
$Ir\ Os_4$. Sisserskite	21.118	" "
Triple Alloys.*		
Cd Pb Bi	10.[illegible]	v. Hauer. J. 18, 236.
Cd Pb Bi	10.[illegible]	" "
Pb Sn Bi	9.[illegible]	Regnault. P. A. 53, 67.
Pb Sn Bi	9.[illegible]	" "
Pb Sn Bi. [illegible] alloy	[illegible]	Spring. Ann. (5), 7, 196.
Pb Sn Bi. [illegible]	[illegible]	" "
Sn Sb Bi	[illegible]	Regnault. P. A. 53, 67.
Cu Ni Sb. [illegible]	[illegible]	[illegible] J. 11, 202.
[illegible] Alloys.		
[illegible]	[illegible]	v. Hauer. J. 18, 236.
[illegible]	[illegible]	" "
[illegible] Wood's [illegible]	[illegible]	Spring. Ann. (5), 7, 196.
[illegible]	[illegible]	v. Hauer. J. 18, 236.
[illegible]	[illegible]	" "
[illegible]	[illegible]	Spring. Ann. (5), 7, 196.

* [illegible]

XLV. HYDROCARBONS.

1st. Paraffins. $C_n H_{2n+2}$

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Methane. Liquefied	$C H_4$	.37	Wroblevsky. C. R. 99, 186.
" "	"	.414 } —164°	{ Olszewski. P. A. (2), 31, 78.
" "	"	.415 } —164°	{ Olszewski. P. A. (2), 31, 78.
" "	"	.416 } —164°	{ Olszewski. P. A. (2), 31, 78.
Propane	$C_3 H_8$	.613, —25°	Lefebvre. J. 21, 329.
Butane	$C_4 H_{10}$	.600, 0°	Pelouze and Cahours. J. 16, 524.
"	"	.600, 0°	Ronalds. J. 18, 507.
"	"	.624, —1°	Lefebvre. J. 21, 329.
Normal pentane. (B. 39°)	$C_5 H_{12}$	.636, 17°	Schorlemmer. J. 15, 386.
" "	"	.6268, 17°	Schorlemmer. J. 19, 527.
" "	"	.626, 14°	Cahours and Demarçay. C. R. 80, 1569.
" "	"	.6267, 14°	Lachowicz. A. C. P. 220, 191.
" "	"	.624, 11°.5	Gladstone. Bei. 9, 249.
" "	"	.6323, 17°	Norton and Andrews. A. C. J. 8, 7.
Isopentane. (B. 30°)	"	.6415, 11°.2 }	Frankland. J. 3, 481.
"	"	.6385, 14°.2 }	Frankland. J. 3, 481.
"	"	.628, 18°	Pelouze and Cahours. J. 16, 527.
"	"	.6375, 13°	Just. A. C. P. 220, 153.
"	"	.6282, 13°.7 }	Schiff. G. C. I, 13, 177.
"	"	.6132, 30°.5 }	Schiff. G. C. I, 13, 177.
"	"	.6402, 0° }	Bartolli and Stracciati. Bei. 9, 697.
"	"	.6111, 30° }	Bartolli and Stracciati. Bei. 9, 697.
Normal hexane. (B. 69°)	$C_6 H_{14}$	.6745, 18°	Williams. J. 10, 418.
" "	"	.669, 16°	Pelouze and Cahours. J. 15, 410.
" "	"	.678, 15°.5	Schorlemmer. J. 15, 386.
" "	"	.6617, 17°.5	Dale. J. 17, 381.
" "	"	.6645, 16°.5	Wanklyn and Erlenmeyer. J. 16, 521.
" "	"	.6630, 17°	Schorlemmer. A. C. P. 161, 263.
" "	"	.689, 0°	Warren. J. 21, 330.
" "	"	.6641, 18° }	Thorpe and Young. A. C. P. 165, 1.
" "	"	.6620, 19°.5 }	Thorpe and Young. A. C. P. 165, 1.
" "	"	.667, 13°	Cahours and Demarçay. C. R. 80, 1570.
" "	"	.6199, 60°.8	Ramsay. J. C. S. 35, 463.

Name.	Formula.	Sp. Gravity.	Authori[ty]
Normal hexane	C_6H_{14}	.6753, 0°	Zander. A. 214, 181.
" "	"	.6129, 69°	
" "	"	.6985, 14°	Lachowicz. P. 220, 192
" "	"	.6681, 10°.8	Schiff. G. C. 177.
" "	"	.6142, 68°.6	
" "	"	.6143, 68°.6	
" "	"	.6603, 20°	Brühl. A. C. 183.
" "	"	.6950, 0°	Bartoli and ciati. Bei.
" "	"	.6343, 68°	
" "	"	.6745, 18°	Norton and drews. A. 8, 7.
Isohexane. (B. 62°)	"	.7011, 0°	Wurtz. J. 8,
"	"	.676, 0°	Warren. J. 2
Hexane. B. 48°—62°	"	.6317, 25°.5	Gladstone. B 249.
" B. 53°—60°	"	.6413, 25°	"
Methyl-diethyl-methane. (B. 64°.)	"	.6765, 20°.5	Wislicenus. P. 219, 815.
Tetramethyl-ethane, or diisopropyl. (B. 58°.)	"	.6769, 10°	Schorlemmer. 566.
	"	.6701, 17°.5	
" "	"	.6569, 29°	
" "	"	.668, 0°	Riche. Ann. (426.
" "	"	.6829, 0°	Zander. A. (214, 181.
" "	"	.6286, 58°	
Hexane from suberic acid. B. 78°.	"	.671, 26°	Riche. Ann. (426.
Normal heptane. (B. 98°.4) From coal oil.	C_7H_{16}	.709, 17°.5	Schorlemmer. 386.
" " " petroleum	"	.7122, 16°	Schorlemmer. 532.
" " " azelaic acid	"	.6851, 17°.5	Dale. J. 17. 3
" " " " "	"	.6840, 20°.5	Schorlemmer Dale. A. (136, 266.
" "	"	.7085, 0°	Warren and S J. 21, 331.
" "	"	.69[illegible], 12°	Cahours and D çay. C. R. 80,
" " From petroleum.	"	.6967, 19°	Beilstein and batow. Be 2028.
" "	"	.6915, 18°	Thorpe and Y A. C. P. 16
" "	"	.6910, 19°	
" " (Abietene)	"	.694	Wenzell. C. 182.
" " "	"	.70048, 0°	Thorpe. J. 37, 371.
" " "	"	.61386, 98°.43	
" "	"	.7176, 20°	Lachowicz. A. 220, 193.
" "	"	.7291, 20°	Lachowicz. A. 220, 203.
" "	"	.7023, 14°	Lachowicz. A. 220, 204.

Name.	Formula.	Sp. Gravity.	Authority.
ptane*, ethyl-amyl, dimethyl-butyl-me-ne. B. 90°.8.	C_7H_{16}	.7069, 0°	Wurtz. J. 8, 576.
"	"	.6819, 17°.5	Schorlemmer. A. C. P. 136, 259.
"	"	.6795, 20°	
"	"	.6789, 19°	Schorlemmer. A. C. P. 136, 264.
"	"	.7259, 0°	Schorlemmer. A. C. P. 136, 269. From petroleum.
"	"	.7148, 15°	
"	"	.6999, 32°	
"	"	.6867, 48°	
"	"	.6833, 18°.4	Grimshaw. A. C. P. 166, 163.
"	"	.69692, 0°	Thorpe. J. C. S. 37, 371.
"	"	.61606, 90°.3	
"	"	.6060, 91°	Ramsay. J. C. S. 35, 463.
ıyl-ethyl-propyl-me-ıne. (B. 91°.)	"	.6895, 20°	Just. A. C. P. 220, 155.
‌thyl-methane. (B.96°)	"	.689, 27°	Ladenburg. B. S. C. 18, 548.
ıethyl-diethyl-me-ane. (B. 86°—87°.)	"	.7111, 0°	Friedel and Ladenburg. J. P. C. 101, 315.
	"	.6958, 20°.5	
" From petroleum.	"	.709, 16°	Schorlemmer. A. C. P. 166, 172.
tane from petroleum	"	.7328, 0°	Bartoli and Stracciati. Bei. 9, 697.
" (B. 92°—94°)	"	.6473, 92°-94°	
" "	"	.7303, 0°	
" "	"	.6462, 92°-94°	
mal octane. (B. 125°.5)	C_8H_{18}	.6945, 18°	Williams. J. 10, 418.
" "	"	.7083, 12°.5	Schorlemmer.
" "	"	.7032, 17°	Schorlemmer. A. C. P. 161, 268.
" "	"	.723, 0°	Riche. J. 13, 248.
" "	"	.721, 10°	
" "	"	.719, 17°.5	Schorlemmer. J. 15, 386.
" "	"	.726, 15°	Pelouze and Cahours. J. 16, 524.
" "	"	.728, 0°	Wurtz. J. 16, 509.
" "	"	.7207, 15°.5	Thorpe and Young. Two lots. A. C. P. 165, 1.
" "	"	.7165, 15°.6	
" "	"	.723, 13°	Cahours and Demarçay. C. R. 80, 1571.
" "	"	.71883, 0°	Thorpe. J. C. S. 37, 371.
" "	"	.61077, 125°.46	
" " From conicein.	"	.712, 11°	Hofmann. Ber. 18, 13.
methyl-butane, or ›butyl. (B. 108°.53.)	"	.6940, 18°	Kolbe. J. 1, 559.
"	"	.7057, 0°	Wurtz. J. 8, 576.
"	"	.7135, 0°	Kopp. A. C. P. 95, 307.
"	"	.7001, 16°.4	

* a mixture of heptane and isoheptane from petroleum, B. 92°—94°, Pelouze and Cahours sp. g. of .688, 15°.

NAME.	FORMULA.	SP. GRAVITY.	AUTHO[RITY]
Tetramethyl-butane, or diisobutyl. (B. 108°.53.)	C_8H_{18}	.7091, 0°	Williams. 35, 125.
"	"	.7085, 0°	
"	"	.7015, 10°	
"	"	.6931, 20°	
"	"	.686, 30°	
"	"	.677, 40°	
"	"	.669, 50°	
"	"	.626, 100°	
"	"	.698, 16°.5	Schorlemm[er] 567.
"	"	.6712, 49°	
"	"	.7111, 0°	Thorpe. 37, 371.
"	"	.61549, 108°.58	
"	"	.7001, 12°.1	Schiff. G. 177.
"	"	.6166 } 107°.8	
"	"	.6167	
Octane from petroleum. (B. 121°.)	"	.732, 12°	Lemoine. 41, 161.
" " " (B. 116°—118°)	"	.7463, 0°	Bartoli an[d] ciati. Be
" " "	"	.6536, 116°-118°	
Normal nonane. (B. 149°)	C_9H_{20}	.741	Pelouze a[nd] hours.* J.
" "	"	.744, 18°	Cahours and çay.* C. 1571.
" "	"	.7279, 18°.5	Thorpe and A. C. P. 1
" "	"	.7330, 0°	Krafft. Ber. 1
" "	"	.7228, 13°.5	
" "	"	.7217, 15°	
" "	"	.7177, 20°	
" "	"	.6541, 99°.1	
" "	"	.7124, 21°	Lachowicz. P. 220, 19
" " (B. 136°)	"	.742, 12°	Lemoine.* 41, 161.
" " (B. 130°)	"	.743, 0°	"
" " "	"	.734, 12°.7	
" " "	"	.731, 16°	
" " "	"	.725, 24°	
" " (B. 136°—138°.)	"	.7623, 0°	Bartoli an[d] ciati.* Be
" "	"	.6492, 136–138°	
Tetramethyl pentane, or butyl-amyl. (B. 132.)	"	.7247, 0°	Wurtz. J.
Normal decane. (B. 167°)	$C_{10}H_{22}$	.7394, 18°.5	Thorpe and A. C. P. 1
" " (B. 170°)	"	.7562, 15°	Jacobson. 184, 202.
" "	"	.7516, 22°	
" " (B. 173°)	"	.7456, 0°	Krafft. Ber.
" "	"	.7452, 0°	
" "	"	.7342, 15°	
" "	"	.7304, 20°	
" "	"	.6690, 99°.3	
" "	"	.73097, 18°	Lachowicz. 220, 180.
Diisoamyl. (B. 155°)	"	.7704, 11°	Frankland.

* Preparations from petroleum, boiling at 130° to 140°, and doubtless containing admixed

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
ıyl. (B. 158°)	$C_{10}H_{22}$	.7418, 0°	Wurtz. J. 8, 573.
	"	.7282, 20°	
(B. 159°)	"	.7865, 18°	Williams. J.10,418.
(B. 156°)	"	.758, 0°	Wurtz. J. 16, 510.
(B. 159°.4)	"	.7358, 9°.8	Schiff. G. C. I. 13, 177.
	"	.6126, 159°.4	
(B. 160°)	"	.7463, 22°	Just. A. C. P. 220, 156.
(B. 157°.1)	"	.72156, 22°	Lachowicz. A.C.P. 220, 172.
:. (B. 160°)	"	.757, 16°	Pelouze and Cahours.* J. 16, 524.
(B. 159°)	"	.758, 14°	Cahours and Demarçay.* C. R. 80,1571.
(B. 155°—160°)	"	.760	Cloez.† C. R. 85, 1003.
(B. 162°—163°)	"	.7324, 20°	Lachowicz.‡ A. C. P. 220, 195.
(B. 152°—153°)	"	.7187, 21°	
	"	.764, 0°	Lemoine.* B. S. C. 41, 161.
	"	.753, 15°.6	
	"	.751, 17°	
	"	.739, 33°.5	
	"	.7711, 0°	Bartoli and Stracciati.* Bei.9,697.
	"	.6475, 158–162°	
ane. (B. 181°)	$C_{11}H_{24}$	.766	Pelouze and Cahours.* J. 16, 524.
(B. 177°)	"	.770, 14°	Cahours and Demarçay.* C. R. 80,1571.
(B. 179°)	"	.769	Cloez.† C. R. 85, 1003.
(B. 180°-182°)	"	.7816, 0°	Bartoli and Stracciati.* Bei.9,697.
"	"	.6448, 180–182°	
l undecane. (B. 194°.5.)	"	.7560, 0°	Krafft. Ber. 15, 1687. Melts at —26°.5.
"	"	.7557, 0°	
"	"	.7448, 15°	
"	"	.7411, 20°	
"	"	.6816, 99°	
ıne. (B. 202°)	$C_{12}H_{26}$	.7574, 0°	Wurtz. J. 8, 576.
"	"	.7568, 18°	Williams. J.10,418.
(B. 198°)	"	.778, 20°	Pelouze and Cahours.* J. 16, 524.
(B. 200°)	"	.784, 14°	Cahours and Demarçay.* C. R. 80,1571.
(B. 196°.5)	"	.782	Cloez.† C. R. 85, 1003.
(B. 201°)	"	.7738, 17°	Schorlemmer. A. C. P. 161, 263.
(B. 196°-200°)	"	.7915, 0°	Bartoli and Stracciati.* Bei.9,697.
"	"	.6442, 198–200°	
l dodecane.	"	.7655, 0°	Krafft. Ber.15,1687.
" (B. 214°.5)	"	.7548, 15°	
"	"	.7511, 20°	
"	"	.6930, 99°.1	

* From petroleum. Doubtless a mixture of isomers.

† From hydrogen evolved from cast iron. Constitution undetermined.

‡ Two isomers from Galician petroleum. Constitution undetermined.

NAME.	FORMULA.	SP. GRAVITY.	AUTH
Tridecane. (B. 219°)	$C_{13}H_{28}$	.796, 17°	Pelouze hours.*
" (B. 217°.5)	"	.793	Cloez.† (1003.
" (B. 218°-220°)	"	.8016, 0°	Bartoli a ciati.*
" "	"	.6469, 218-220°	
Normal tridecane. (B. 234°)	"	.7716, 0°	Krafft. Be
" "	"	.7718, 0°	
" "	"	.7608, 15°	
" "	"	.7571, 20°	
" "	"	.7008, 99°	
Tetradecane. (B. 238°)	$C_{14}H_{30}$	.809, 20°	Pelouze hours.*
" (B. 236°)	"	.812	Cloez.† (1003.
" (B. 236°-240°)	"	.8129, 0°	Bartoli a ciati.*]
" "	"	.6412, 236-240°	
Normal tetradecane.	"	.7753, 4°.5	Krafft. Ber Melts at
" " (B. 252°.5)	"	.7750, 5°	
" "	"	.7715, 10°	
" "	"	.7681, 15°	
" "	"	.7645, 20°	
" "	"	.7087, 99°.2	
" "	"	.7738, 5°.4	Krafft. Ber
Pentadecane. (B. 260°)	$C_{15}H_{32}$	.825, 19°	Pelouze hours.*
" (B. 258°)	"	.830	Cloez.† (1003.
" (B. 258°-262°)	"	.8224, 0°	Bartoli a ciati.* I
" "	"	.6385, 258-262°	
Normal pentadecane.	"	.7757, 10°	Krafft. Ber Melts at
" " (B. 270°.5)	"	.7759, 10°	
" "	"	.7724, 15°	
" "	"	.7689, 20°	
" "	"	.7136, 99°.8	
Hexdecane, dioctyl, or di-isoctyl. (B. 278.)	$C_{16}H_{34}$	.850	Cloez.† (1003.
" "	"	.7438, 15°	Eichler. 1882.
" (B. 268°.5)	"	.8022, 0°	Alechin. 1225.
" (B. 264°)	"	.80011, 18°	Lachowicz P. 220, 1
" (B. 278°—282°)	"	.8287, 0°	Bartoli a ciati.* I
" "	"	.6396, 278-282°	
Normal hexdecane.	"	.7754, 18°	Krafft. Ber Melts at
" " (B. 287°.5)	"	.7742, 20°	
" "	"	.7707, 25°	
" "	"	.7197, 99°	
" "	"	.7754, 14°.2	Krafft. Be
Heptadecane. (B. 303°)	$C_{17}H_{36}$	.7764, 22°.5	Krafft.‡ 1687. 22°.5
"	"	.7767, 22°.5	
"	"	.7749, 25°	
"	"	.7714, 30°	
"	"	.7245, 99°	

* From petroleum. Probably a mixture of isomers.
† From hydrogen evolved from cast iron. Constitution undetermi
‡ All of Krafft's paraffins are said to belong to the normal series.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
decane. (B. 317°)	$C_{18}H_{38}$	.7768, 28°	
"	"	.7754, 30°	
"	"	.7719, 35°	Krafft. Ber. 15, 1687. Melts at 28°.
"	"	.7685, 40°	
"	"	.7288, 99°	
"	"	.7766, 28°	Krafft. Ber. 19, 2218.
decane. (B. 330°)	$C_{19}H_{40}$	.7774, 32°	
"	"	.7754, 35°	Krafft. Ber. 15, 1687. Melts at 32°.
"	"	.7720, 40°	
"	"	.7323, 99°.3	
sane. (M. 36°.7)	$C_{20}H_{42}$	.7779, 36°.7	
"	"	.7487, 80°.2	Krafft. Ber. 15, 1711.
"	"	.7363, 99°.2	
"	"	.7776, 36°.7	Krafft. Ber. 19, 2218.
eicosane. (M. 40°.4)	$C_{21}H_{44}$	.7783, 40°.4	
"	"	.7557, 74°.7	Krafft. Ber. 15, 1711.
"	"	.7400, 98°.9	
sane. (M. 44°.4)	$C_{22}H_{46}$	.7782, 44°.4	
"	"	.7549, 79°.6	" "
"	"	.7422, 99°.2	
osane. (M. 47°.7)	$C_{23}H_{48}$	.7785, 47°.7	
"	"	.7570, 80°.8	" "
"	"	.7456, 98°.8	
cosane. (M. 51°.1)	$C_{24}H_{50}$	.7786, 51°.1	
"	"	.7628, 76°	" "
"	"	.7481, 98°.9	
tacosane. (M. 59°.5)	$C_{27}H_{56}$	.7796, 59°.5	
"	"	.7659, 80°.8	" "
"	"	.7545, 99°	
triacontane. (M. 68°.1)	$C_{31}H_{64}$	.7808, 68°.1	
"	"	.7730, 80°.8	" "
"	"	.7619, 98°.8	
riacontane. (M. 70°)	$C_{32}H_{66}$	.7810, 70°	Krafft. Ber. 19, 2218.
tatriacontane.	$C_{35}H_{72}$	.7816, 74°.7	
" (M. 74°.7)	"	.7775, 80°.8	Krafft. Ber. 15, 1711.
"	"	.7664, 99°.2	
affin.* M. 56°	C_nH_{2n+2}	.913	
" M. 61°	"	.921	
" M. 67°	"	.927	
" M. 72°	"	.934	From ozokerite. Sauerlandt. J. 1879, 1147.
" M. 76°	"	.940	
" M. 82°	"	.943	
" M. 38°	"	.872, 17°	
" "	"	.879, 55°	
" M. 43°	"	.883, 17°	
" "	"	.788, 55°	
" "	"	.889, 17°	
" "	"	.785, 55°	
" M. 46°	"	.887, 17°	
"	"	.781, 60°–65°	Albrecht. D. J. 218, 280.
M. 47°	"	.900, 17°	
"	"	.775, 60°–65°	
M. 51°	"	.908, 17°	
"	"	.775, 60°–65°	
M. 56°	"	.912, 17°	
"	"	.777, 60°–65°	

ttempt has been made to secure completeness concerning the specific gravity of common The data given are included only to facilitate comparison.

NAME.	FORMULA.	SP. GRAVITY.	AUTHOI
Paraffin. M. 38°	$C_n H_{2n+2}$	.874, 21°, s.	From sh Beilby. Sept., 18 Data gi sp. g. of in soluti
"	"	.783, 38°	
"	"	.779, 48°.4	
"	"	.775, 49°	
"	"	.771, 54°.5	
"	"	.767, 60°	
"	"	.768, 65°.5	

2d. Olefines. $C_n H_{2n}$.

NAME.	FORMULA.	SP. GRAVITY	AUTHOR
Ethylene. Liquefied	$C_2 H_4$	.414, —21°	Cailletet an thiss. C. 1202.
" "	"	.342, —7°.8	
" "	"	.358, —3°.7	
" "	"	.332, +4°.8	
" "	"	.306, +6°.2	
Butylene	$C_4 H_8$	.739, 0°	Chapman. J.
"	"	.635, —13°.5	Puchot. A 28, 207
"	"	.639, —14°.2	
Amylene	$C_5 H_{10}$	.6517, 16°.5	Mendelejeff.
"	"	.6633, 0°	Bauer. J. 1
"	"	.66277, 0°	Buff. A. (Supp. Bd
"	"	.65490, 10°	
"	"	.64450, 17°	
"	"	.62384, 33°	
"	"	.625812, 33°.5	
"	"	.62634, 35°.5	
"	"	.679, 0°	Buff. J. 21,
"	"	.6319, 35°	Ramsay. J. (463.
"	"	.6617, 9°.9	Schiff. G. C 187.
"	"	.6340, 35°.6	
"	"	.6356, 36°.3	
"	"	.6503, 21°	Gladstone. 249.
Trimethyl ethylene	"	.6783, 0°	Le Bel. B. S 547.
β. Ethyl methyl ethylene	"	.670, 0°	Le Bel. B. S 546.
Isopropyl ethylene	"	.648, 0°	Flawitzky. 992.
Hexylene	$C_6 H_{12}$	.709, 12°	Pelouze an hours. J.
"	"	.6937 } 0°	Wurtz. J. 1
"	"	.6986 } 0°	
"	"	.702, 0°	Geibel and B 21, 336.
"	"	.6996 } 0°	Hecht. A. C 146.
"	"	.6997 } 0°	
Tetramethyl ethylene	"	.712	Pawl 19

Name.	Formula.	Sp. Gravity.	Authority.
yl dimethyl ethy-	C_8H_{12}	.712, 0°	Jawein. Ber. 11, 1258.
" "	"	.698, 19°	
yl dimethyl ethy-	"	.702, 0°	" "
" "	"	.687, 19°	
lene	C_7H_{14}	.718, 18°	Williams. J. 11, 438.
	"	.7060, 12°.5	Schorlemmer. A. C. P. 136, 257.
	"	.7026, 19°.5	" "
	"	.7060, 16°	Grimshaw. A. C. P. 166, 168.
	"	.742, 20°	Renard. Ber. 16, 2368.
	"	.71812, 20°	Sokolow. Ber. 21, ref. 56.
hyl isopropyl ethy-	"	.6985, 14°	Markownikow. Z. C. 14, 268.
" "	"	.7144, 0°	Pawlow. A. C. P. 178, 194.
ne	C_8H_{16}	.708, 16°	Cahours. C. R. 31, 143.
	"	.723, 17°	Bouis. J. 7, 582.
	"	.737, 20°	Fittig. J. 13, 320.
	"	.7396, 0°	Warren and Storer. J. 21, 331.
	"	.7217, 17°	Möslinger. Ber. 9, 1000.
	"	.7294, 9°.9	Schiff. G. C. I. 13, 177.
	"	.6306, 123°.4	
	"	.7222, 22°	Lachowicz. A. C. P. 220, 185.
	"	.7197, 20°	Brühl. A. C. P. 235, 1.
	"	.73645, 20°	Sokolow. Ber. 21, ref. 56.
ropyl ethylene	"	.7526, 16°	Williams. Ber. 10, 908.
l ethyl propyl ethne.	"	.73138, 20°	Sokolow. Ber. 21, ref. 56.
utylene	"	.734, 0°	Butlerow. J. C. S. 34, 122.
	"	.737, 0°	Lermontoff. A. C. P. 196, 116.
ene. B. 145°	C_9H_{18}	.757, 20°.5	Fittig. J. 18, 321.
B. 153°	"	.7618, 0°	Warren and Storer. J. 21, 331.
B. 134°	"	.853, 18°.4	Lemoine. B. S. C. 41, 161.
	"	.74833, 20°	Sokolow. Ber. 21, ref. 56.
lene. B. 165°	$C_{10}H_{20}$	.7777, 0°	Bauer. J. 14, 660.
B. 151°	"	.8416, 0°	Schneider. A. C. P. 157, 208.
	"	.8248, 20°	
B. 174°.6	"	.7912, 0°	Warren and Storer. J. 21, 332.
B. 175°.8	"	.828, 0°	Warren and Storer. J. 21, 331.
	"	.7789, 10°	Schiff. G. C. I. 13, 177.

Name.	Formula.	Sp. Gravity.	Auth[…]
Diamylene. B. 156°	$C_{10}H_{20}$	.6611 } 156°	Schiff. G 177.
"	"	.6615 } 156°	
"	"	.77753, 15°.2	Nasini a heimer. 15, 50.
" B. 165°	"	.855, 14°	Lemoine. 41, 161.
" B. 164°	"	.7387, 20°	Lachowic P. 220, 1
Endecylene	$C_{11}H_{22}$	.782, 0°	Warren.
"	"	.8398, 0°	Warren ar J. 21, 3
"	"	.791, 0°	
Dodecylene. B. 216°	$C_{12}H_{24}$	.791, 0°	Warren.
" B. 212°.6	"	.8361	Warren ar J. 21, 33
" B. 208°-219°.	"	.8543 } 0°	
"	"	.8654 } 0°	
"	"	.7954, —81°	Krafft. Be
"	"	.7729 } 0°	
"	"	.7732 } 0°	
"	"	.7620, 15°	
"	"	.7511, 30°	
Dihexylene. B. 196°-199°.	"	.796, 0°	From two Jawein. 1258.
"	"	.786, 19°	
"	"	.809, 0°	
"	"	.798, 19°	
Triisobutylene. B. 178°	"	.774, 0°	Butlerow Acad. tersb.,
"	"	.746, 50°	
"	"	.773 } 0°	Lermontof P. 196, 1
"	"	.774 } 0°	
" B. 180°	"	.782, 0°	Five diff Puchot (5), 28,
"	"	.7435, 51°.6	
"	"	.707, 99°.5	
"	"	.785, 0°	
"	"	.751, 44°.9	
"	"	.783, 0°	
"	"	.738, 60°.5	
"	"	.707, 100°.2	
"	"	.780, 0°	
"	"	.779, 0°	
"	"	.768, 14°	
Tridecylene	$C_{13}H_{26}$	.8445, 0°	Warren a J. 21, 33
Tetradecylene	$C_{14}H_{28}$	.7936, —12°	Krafft Be
"	"	.7852, 0°	
"	"	.7745, 15°	
"	"	.7638, 30°	
Triamylene	$C_{15}H_{30}$	.8139	Bauer. J.
Cetene. B. 275°	$C_{16}H_{32}$	.7893, 15°.2	Mendelejel
"	"	.7915, 4°	Two a Krafft. 3018.
"	"	.7839, 15°	
"	"	.7686, 37°.1	
"	"	.7917, 4°	
"	"	.7842, 15°	
"	"	.7689, 37°.1	
Dioctylene. B. 250°	"	.814, 15°	Bouis. W
Etherol. B. 280°	"	.9174	Du

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
	$C_{16}H_{32}$	.921	Serullas. Ann. (2), 39, 178.
ene	$C_{18}H_{36}$	.7910, 18°	Krafft. Ber. 16, 3018.
	"	.7881, 22°.1	
	"	.7790, 35°.6	
ene	$C_{20}H_{40}$	.8710, 0°	Bauer. J. 14, 660.
	$C_{27}H_{54}$	.861, 15°	Weltzien's "Zusammenstellung."
	$C_{30}H_{60}$	.89	Watts' Dictionary.

3d. Acetylène Series and Derivatives.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
ne. Liquefied	C_2H_2	.460, —7°	Ansdell. C. N. 40, 136. Critical t°., 37°.05.
"	"	.456, —3°	
"	"	.451, 0°	
"	"	.441, 4°.4	
"	"	.432, 9°	
"	"	.420, 16°.4	
"	"	.413, 20°.6	
"	"	.404, 26°.25	
"	"	.397, 30°	
"	"	.381, 34°	
"	"	.364, 35°.8	
lene. B. 41°—42°	C_5H_8	.69999, 0°	Buff. A. C. P., 4 Supp. Bd., 129.
	"	.687386, 17°	
	"	.65719, 41°	
	"	.65082, 42°	
pyl acetylene	"	.652, 11°	Bruylants. Ber. 8, 407.
" B. 28°-29°	"	.6854, 0°	Flawitzky and Kriloff. Ber. 11, 1939.
ne. B. 37°—38°	"	.6823, 20°	Williams. J. 18, 495.
	"	.6709, 18°	Gladstone. J. C. S. 49, 628.
Pentine	"	.6766, 18°	" "
lene. B. 80°—83°	C_6H_{10}	.710, 18°	Reboul and Truchot. J. 20, 587.
	"	.7494, 0°	Hecht. Ber. 11, 1051.
	"	.7377, 18°	
B. 59°.5	"	.684, 14°	Berthelot and Luca. J. 1, 590.
	"	.68724, 17°	Buff. A. C. P., 4th Supp. Bd., 129.
	"	.64682, 59°.5	
	"	.64564, 58°	
	"	.7074, 0°	Zander. A. C. P. 214, 181.
	"	.6508, 59°.5	
	"	.6983, 11°.9	Schiff. G. C. I. 13, 177.
	"	.6503, 59°.3	
	"	.6880, 20°	Brühl. Bei. 4, 780.
	C_6H_8	.8579, 18°.2	L. Henry. C. N. 38, 101.

Name.	Formula.	Sp. Gravity.	Au
Dipropargyl	C_6H_6	.81, 18°	L. Hei (2),
"	"	.82	Berthe J. C
Ethyl propyl acetylene	C_7H_{12}	.790, 0°	Béhal. 809.
Tetramethyl allylene	"	.9518, 9°	L. He 400.
Methyl propyl allylene	"	.8081, 20°	Renar 419.
Heptidene	"	.7458, 20°	Brühl. 235,
Conylene	C_8H_{14}	.76076, 15°	Werth 123,
From allyl diethyl carbinol.	"	.7734, 0°	Reforn C. (
" " "	"	.75856, 15°.4	
" " "	"	.75622, 18°	
From allyl dipropyl carbinol.	$C_{10}H_{18}$	.7870, 0°	Reforr C. (
" "	"	.7830, 0°	
" "	"	.7825, 0°	
		.7855, 0°	
" "	"	.7726, 15°	
" "	"	.7705, 15°	
		.7738, 15°	
" "	"	.7740, 16°	
" "	"	.7705, 20°	
" "	"	.7681, 20°	
" "	"	.7665, 20°	
		.7703, 20°	
" "	"	.7728, 20°.6	
From allyl dimethyl carbinol.	$C_{12}H_{20}$	.8530, 0°	Nikols eff. 27,
" "	"	.8385, 20°	
" "	"	.8512, 0°	Albits (2),
" "	"	.8449, 9°.8	
" "	"	.8349, 21°.4	
Dodecylidene	$C_{12}H_{22}$	.8030, 0°	Krafft.
"	"	.7917, 15°	
"	"	.7788, 32°.5	
Tetradecylidene	$C_{14}H_{26}$	.8064, 6°.5	"
"	"	.8000, 15°.2	
"	"	.7892, 30°	
Benylene	$C_{15}H_{28}$	.9114, 0°	Werth 123,
Trivalerylene	$C_{15}H_{24}$	.862, 15°	Rebou
Hexadecylidene	$C_{16}H_{30}$	.8039, 20°	Krafft.
"	"	.7969, 30°	
Octadecylidene	$C_{18}H_{34}$	.8016, 30°	"
Eikosylene	$C_{20}H_{38}$	.8181, 24°	Lippm licze

4th. Benzene Series.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
...zene	C_6H_6	.85, 15°.5	Faraday. P. T. 1825, 440.
"	"	.956, —18°,s.	
"	"	.85	Mitscherlich. A. C. P. 9, 43.
"	"	.85	Mansfield. J. 1, 711.
"	"	.89911, 0°	Kopp. P. A. 72, 243.
"	"	.88372, 15°.2	
"	"	.88354, 15°.3	
"	"	.8931, 5°—10°	Regnault. P. A. 62, 50.
"	"	.8827, 10°—15°	
"	"	.8838, 15°—20°	
"	"	.8841, 15°	Mendelejeff. J. 18, 7.
"	"	.8667	Church. J. 17, 531.
"	"	.8957, 0°	Warren. J. 18, 515.
"	"	.8820, 15°.5	
"	"	.895, 3°	Jungfleisch. C. R. 64, 911.
"	"	.812, 80°.5	
	"	.8995, 0°	Louguinine. Ann. (4), 11, 453. Other values given for intermediate t°s.
	"	.8890, 10°	
	"	.8784, 20°	
	"	.8568, 40°	
	"	.8349, 60°	
	"	.8126, 80°	
	"	.90023, 0°	Adrieenz. Ber. 6, 442.
	"	.89502, 5°	
	"	.88982, 10°	
	"	.88462, 15°	
	"	.87940, 20°	
	"	.87417, 25°	
	"	.86891, 30°	
	"	.86362, 35°	
	"	.85829, 40°	
	"	.85291, 45°	
	"	.84748, 50°	
	"	.84198, 55°	
	"	.83642, 60°	
	"	.83078, 65°	
	"	.82505, 70°	
	"	.81923, 75°	
	"	.81331, 80°	
	"	.899487, 0°	Pisati and Paterno. J. C. S. (2), 12, 686.
	"	.883573, 15°	
	"	.872627, 25°	
	"	.846170, 50°	
	"	.818721, 75°	
	"	.88029	Landolt. Ber. 9, 907.
	"	.8773, 20°	Naumann. Ber. 10, 1422.
	"	.8142, 80°	Ramsay. J. C. S. 35, 463.
	"	.8858, 15°	Thorpe and Watts. J. C. S. 37, 102.
	"	.8111, 80°	Schiff. Ber. 14, 2769.

NAME.	FORMULA.	SP. GRAVITY.	AUTH
Benzene	C_6H_6	.9000, 0°	Dieff. J. 27, 368.
"	"	.8818, 20°	
"	"	.8839, 14°.2	Schiff. (177.
"	"	.8111, 80°.1	
"	"	.8799, 20°	Brühl.]
"	"	.87901, 20°	Flink. E
"	"	.8719, 25°.7	Schall. Be
"	"	.8845, 13°.8	
"	"	.8881, 7°5	Gladstone 249.
"	"	.8901 } 10°	
"	"	.8903 } 10°	
"	"	.8801, 20°	Knops. 1887, 1'
"	"	.85716, 40°.1	Taken a pressu t°. bei ing p(pres: serve beck. 1, 654.
"	"	.85493, 41°.3	
"	"	.84324, 53°.2	
"	"	.84006, 54°.7	
"	"	.83101, 64°.1	
"	"	.83081, 64°.2	
"	"	.82099, 72°.9	
"	"	.82079, 73°.4	
"	"	.81387 } 79°.2	
"	"	.81392 } 79°.2	
"	"	.81297, 79°.9	
"	"	.87907, 20°	Weegman 2, 218.
Toluene	C_7H_8	.86	Pelletier ter. Gi
"	"	.821	Couerbe.
"	"	.864, 23°	Glénard dault.
"	"	.87, 18°	Deville.
"	"	.8650	Church.
"	"	.8824, 0°	Warren.
"	"	.8720, 15°	
"	"	.881, 5°	Tollens a A. C. P
"	"	.8841, 0°	Louguini (4), 11, values interme
"	"	.8657, 20°	
"	"	.8375, 50°	
"	"	.8086, 80°	
"	"	.7889, 100°	
"	"	.866, 20°	Post and Ber. 8,
"	"	.8657, 20°	Naumann 1425.
"	"	.7650, 111°	Ramsay. 35, 463.
"	"	.8822, 0°	Naccar liani. Sever terme ues ar
"	"	.8797, 2°.77	
"	"	.8722, 10°.89	
"	"	.8692, 14°.13	
"	"	.8653, 18°.43	
"	"	.8556, 28°.74	
"	"	.8430, 42°.24	
"	"	.8258, 60°.04	
"	"	.8136, 72°.46	
"	"	.7874, 99°.01	
"	"	.7811, 105°.17	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
luene	C_7H_8	.8708, 13°.1	Schiff. G. C. I 13, 177.
"	"	.7780, 109°.2	
"	"	.77807, 109°.2	
"	"	.7781, 109°.2	
"	"	.8656, 20°	Brühl. Bei. 4, 780.
"	"	.7801, 109°	Schall. Ber. 17, 2204.
"	"	.8617, 26°	Schall. Ber. 17 2555.
"	"	.85098, 34°.5	
"	"	.8704, 7°.5	Gladstone. Bei. 9, 249.
"	"	.8643, 14°	Gladstone and Tribe. J. C. S. 47, 448.
"	"	.8691, 14°	
"	"	.82664, 61°.2	Taken at different pressures, each t°. being the boiling point at the pressure observed. Neubeck. Z. P. C. 1, 656.
"	"	.82441, 62°.3	
"	"	.82435, 63°.5	
"	"	.80656, 81°.2	
"	"	.80637, 81°.5	
"	"	.79470, 93°.4	
"	"	.79494, 93°.4	
"	"	.78576, 102°.6	
"	"	.78515, 103°	
"	"	.77816, 110°.1	
"	"	.77788, 110°.1	
"	"	.77741, 110°.7	
"	"	.77694, 110°.8	
ylene*	$C_6H_4(CH_3)_2$	.8309, 15°	Mendelejeff. J. 13, 7.
"	"	.8668, 21°	Beilstein. A. C. P. 133, 37.
"	"	.8770, 0°	Louguinine. Ann. (4), 11, 453. Values given for other intermediate t°s.
"	"	.8600, 20°	
"	"	.8340, 50°	
"	"	.8073, 80°	
"	"	.7892, 100°	
"	"	.8616, 20°	Naumann. Ber. 10, 1426.
"	"	.7335, 132-134°	Ramsay. J. C. S. 35, 463.
"	"	.8619, 20°	Brühl. A. C. P. 235, 1.
xylene	" 1.2	.7559, 141°.1	Schiff. Ber. 15, 2974.
"	"	.8632, 18°	Gladstone. Bei. 9, 249.
"	"	.876, 24°.5	Colson. Ann. (6), 6, 86.
"	"	.81449, 90°.4	Taken at different pressures, each t°. being the boiling point at the pressure observed. Neubeck. Z. P. C. 1, 656.
"	"	.81422, 90°.6	
"	"	.79497, 112°.7	
"	"	.79435, 112°.9	
"	"	.78204, 123°.8	
"	"	.78188, 123°.8	
"	"	.77398, 133°.9	
"	"	.77413, 133°.9	
"	"	.76684, 141°.1	
"	"	.76661, 141°.1	
"	"	.76569, 142°.5	
"	"	.8932, 0°	Pinette. A. C. P. 243, 50.
"	"	.7684, 141°.9	

* character not specified. For sp. gr. of several mixed xylenes see Lewinstein, Ber. 17, 446.

Name.	Formula.	Sp. Gravity.	Author
Dipropargyl	C_6H_6	.81, 18°	L. Henry. (2), 11, 12
"	"	.82	Berthelot an J. C. S. 40
Ethyl propyl acetylene	C_7H_{12}	.790, 0°	Béhal. Ber. 809.
Tetramethyl allylene	"	.9518, 9°	L. Henry. 400.
Methyl propyl allylene	"	.8031, 20°	Renard. C. 419.
Heptidene	"	.7458, 20°	Brühl. A. 235, 1.
Conylene	C_8H_{14}	.76076, 15°	Wertheim. A 123, 157.
From allyl diethyl carbi-	"	.7734, 0°	
nol. " "	"	.75856, 15°.4	Reformatsky. C. (2), 30,
" " "	"	.75622, 18°	
From allyl dipropyl carbi-	$C_{10}H_{18}$	.7870	
nol. "	"	.7830 } 0°	
" "	"	.7825	
" "	"	.7855	
" "	"	.7726	
" "	"	.7705 } 15°	
" "	"	.7738	Reformatsky.
" "	"	.7740, 16°	C. (2), 27,
" "	"	.7705	
" "	"	.7681	
" "	"	.7665 } 20°	
" "	"	.7703	
" "	"	.7728, 20°.6	
From allyl dimethyl carbi-	$C_{12}H_{20}$	.8530, 0°	Nikolsky and
nol. "	"	.8385, 20°	eff. J. P. 27, 383.
" "	"	.8512, 0°	
" "	"	.8449, 9°.8	Albitsky. J (2), 30, 213
" "	"	.8349, 21°.4	
Dodecylidene	$C_{12}H_{22}$	.8030, 0°	
"	"	.7917, 15°	Krafft. Ber. 1
"	"	.7788, 32°.5	
Tetradecylidene	$C_{14}H_{26}$	.8064, 6°.5	
"	"	.8000, 15°.2	"
"	"	.7892, 30°	
Benylene	$C_{15}H_{28}$	.9114, 0°	Wertheim. A 123, 157.
Trivalerylene	$C_{15}H_{24}$	.862, 15°	Reboul. J.
Hexadecylidene	$C_{16}H_{30}$	.8039, 20°	Krafft. Ber. 1
"	"	.7969, 30°	
Octadecylidene	$C_{18}H_{34}$	.8016, 30°	"
Eikosylene	$C_{20}H_{38}$	.8181, 24°	Lippmann a liczek. Be

Name.	Formula.	Sp. Gravity.	Authority.
Trimethylbenzene. Mesitylene.	$C_6H_3(CH_3)_3$	.8643, 0°	Warren. J. 18, 515.
"	"	.8530, 15°	
"	"	.8694, 9°.8	Schiff. G. C. I. 13, 177.
"	"	.7372, 164°.5	
"	"	.8558, 20°	Brühl. Bei. 4, 781.
"	"	.8632, 19°	Gladstone. Bei. 9, 249.
" Pseudocumene	" 1.3.4	.8901, 0°	Konowalow. Ber. 20, ref. 570.
Orthomethylethylbenzene	$C_6H_4.CH_3.C_2H_5$. 1.2	.8731, 16°	Claus and Mann. Ber. 18, 1122.
Metamethylethylbenzene	" 1.3	.869, 20°	Wroblevsky. A. C. P. 192, 198.
Paramethylethylbenzene	" 1.4	.8694, 11°.3	Schiff. G. C. I. 13, 177.
"	"	.7393, 162°	
"	"	.7394	
"	"	.864, 20°	Anschütz. A. C. P. 235, 314.
Propylbenzene	$C_6H_5.C_3H_7$	.881, 0°	Paterno and Spica. Ber. 10, 294.
"	"	.88009, 0°	Spica. J.C.S. 36,631.
"	"	.8692, 17°	Wispek and Zuber. A. C. P. 218, 380.
"	"	.8702, 9°.8	Schiff. G. C. I. 13, 177.
"	"	.7399, 158°.5	
Isopropylbenzene. Cumene.	"	.87	Pelletier and Walter. Ann. (2), 67, 269.
" "	"	.8792, 0°	Warren. J. 18, 515.
" "	"	.8675, 15°	
" "	"	.87976, 0°	Pisati and Paterno. J. C. S. (2), 12, 686.
" "	"	.85870, 25°	
" "	"	.83756, 50°	
" "	"	.81585, 75°	
" "	"	.79824, 100°	
" "	"	.86576, 17°.5	Liebmann. Ber. 18, 46.
" "	"	.8776, 0°	Two preparations. Silva. B. S. C. 43, 317.
" "	"	.8577, 25°	
" "	"	.87798, 0°	
" "	"	.85766, 25°	
" "	"	.8432, 12°	Gladstone. Bei. 9, 249.
...amethylbenzene	$C_6H_2(CH_3)_4$	.8816, 9°	Knublauch. Tübingen Inaug. Diss., 1872.
...ethylethylbenzene	$C_6H_3(CH_3)_2C_2H_5$. 1.2.4.	.8783, 20°	Ernst and Fittig. A. C. P. 139, 192.
"	" 1.3.5	.8644, 20°	Jacobsen. B. S. C. 24, 73.
"	" "	.861, 20°	Wroblevsky. A. C. P. 192, 217.
"	" 1.3.4	.8686, 20°	Anschütz. A. C. P. 235, 324.
...ylbenzene	$C_6H_4(C_2H_5)_2$. 1.4	.8707, 15°.5	Fittig and König. A. C. P. 144, 235.
...methylpropylbenzene.	$C_6H_4.CH_3.C_3H_7$. 1.3	.863, 16°	Claus and Stuesser. Ber. 13, 890.

NAME.	FORMULA.	SP. GRAVITY.	AUTHO
Benzene	C_6H_6	.9000, 0°	Dieff. J. I 27, 368.
"	"	.8818, 20°	
"	"	.8839, 14°.2	Schiff. G. 177.
"	"	.8111, 80°.1	
"	"	.8799, 20°	Brühl. Bei
"	"	.87901, 20°	Flink. Bei.
"	"	.8719, 25°.7	Schall. Ber.
"	"	.8845, 13°.8	
"	"	.8881, 7°5	Gladstone. 249.
"	"	.8901 } 10°	
"	"	.8903 } 10°	
"	"	.8801, 20°	Knops. V. 1887, 17.
"	"	.85716, 40°.1	Taken at d pressures t°. being t ing poin pressu served. beck. Z. 1, 654.
"	"	.85493, 41°.3	
"	"	.84324, 53°.2	
"	"	.84006, 54°.7	
"	"	.83101, 64°.1	
"	"	.83081, 64°.2	
"	"	.82099, 72°.9	
"	"	.82079, 73°.4	
"	"	.81387 } 79°.2	
"	"	.81392 } 79°.2	
"	"	.81297, 79°.9	
"	"	.87907, 20°	Weegmann. 2, 218.
Toluene	C_7H_8	.86	Pelletier and ter. Gm.
"	"	.821	Couerbe. G
"	"	.864, 23°	Glénard and dault. Gr
"	"	.87, 18°	Deville. Gn
"	"	.8650	Church. J.
"	"	.8824, 0°	Warren. J.
"	"	.8720, 15°	
"	"	.881, 5°	Tollens and A. C. P. 1
"	"	.8841, 0°	Louguinine. (4), 11, 453 values giv intermedia
"	"	.8657, 20°	
"	"	.8375, 50°	
"	"	.8086, 80°	
"	"	.7889, 100°	
"	"	.866, 20°	Post and Me Ber. 8, 155
"	"	.8657, 20°	Naumann. 1425.
"	"	.7650, 111°	Ramsay. J 35, 463.
"	"	.8822, 0°	Naccari and liani. Be Several ot termediat ues are gi
"	"	.8797, 2°.77	
"	"	.8722, 10°.89	
"	"	.8692, 14°.13	
"	"	.8653, 18°.43	
"	"	.8556, 28°.74	
"	"	.8430, 42°.24	
"	"	.8258, 60°.04	
"	"	.8136, 72°.46	
"	"	.7874, 99°.01	
"	"	.7811, 105°.17	

Name.	Formula.	Sp. Gravity.	Authority.
	C_7H_8	.8708, 18°.1	Schiff. G. C. I 18, 177.
	"	.7780, 109°.2	
	"	.77807, 109°.2	
	"	.7781, 109°.2	
	"	.8656, 20°	Brühl. Bei. 4, 780.
	"	.7801, 109°	Schall. Ber. 17, 2204.
	"	.8617, 26°	Schall. Ber. 17 2555.
	"	.85098, 34°.5	
	"	.8704, 7°.5	Gladstone. Bei. 9, 249.
	"	.8643, 14°	Gladstone and Tribe. J. C. S. 47, 448.
	"	.8691, 14°	
	"	.82664, 61°.2	Taken at different pressures, each t°. being the boiling point at the pressure observed. Neubeck. Z. P. C. 1, 656.
	"	.82441, 62°.3	
	"	.82435, 63°.5	
	"	.80656, 81°.2	
	"	.80637, 81°.5	
	"	.79470, 98°.4	
	"	.79494, 98°.4	
	"	.78576, 102°.6	
	"	.78515, 108°	
	"	.77816, 110°.1	
	"	.77788, 110°.1	
	"	.77741, 110°.7	
	"	.77694, 110°.8	
ne*	$C_6H_4(CH_3)_2$	.8309, 15°	Mendelejeff. J. 13, 7.
	"	.8668, 21°	Beilstein. A. C. P. 133, 37.
	"	.8770, 0°	Louguinine. Ann. (4), 11, 453. Values given for other intermediate t°s.
	"	.8600, 20°	
	"	.8340, 50°	
	"	.8073, 80°	
	"	.7892, 100°	
	"	.8616, 20°	Naumann. Ber. 10, 1426.
	"	.7335, 132-134°	Ramsay. J. C. S. 35, 463.
	"	.8619, 20°	Brühl. A. C. P. 235, 1.
oxylene	" 1.2	.7559, 141°.1	Schiff. Ber. 15, 2974.
	"	.8632, 18°	Gladstone. Bei. 9, 249.
	"	.876, 24°.5	Colson. Ann. (6), 6, 86.
	"	.81449, 90°.4	Taken at different pressures, each t°. being the boiling point at the pressure observed. Neubeck. Z. P. C. 1, 656.
	"	.81422, 90°.6	
	"	.79497, 112°.7	
	"	.79435, 112°.9	
	"	.78204, 123°.8	
	"	.78188, 123°.8	
	"	.77398, 133°.9	
	"	.77413, 133°.9	
	"	.76684, 141°.1	
	"	.76661, 141°.1	
	"	.76569, 142°.5	
	"	.8932, 0°	Pinette. A. C. P. 243, 50.
	"	.7684, 141°.9	

…character not specified. For sp. gr. of several mixed xylenes see Lewinstein, Ber. 17, 446.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORI
Metaxylene	$C_6 H_4 (C H_3)_2$. 1.3	.878, 0°	Warren. J.
"	"	.866, 15°	
"	"	.8715, 12°.3	Schiff. G. 13, 177.
"	"	.7567, 139°	
"	"	.7571 } 139°.2	
"	"	.7572 } 139°.2	
"	"	.8726, 15°.5	Gladstone. 249.
"	"	.861, 24°.5	Colson. An 6, 86.
"	"	.8655, 20°	Brühl. A. 235, 1.
"	"	.80588, 88°.8	Taken at di pressures, being the point at the ure obse Neubeck. C. 1, 656.
"	"	.80522, 89°.8	
"	"	.78722, 108°.8	
"	"	.78667, 108°.7	
"	"	.77483, 120°.5	
"	"	.77427, 121°.8	
"	"	.76639 } 129°.2	
"	"	.76647 } 129°.2	
"	"	.75799 } 138°.1	
"	"	.75795 } 138°.1	
"	"	.75658 } 139°.1	
"	"	.75685 } 139°.1	
"	"	.8812, 0°	Pinette. A. 243, 50.
"	"	.7567, 138°.9	
Paraxylene	" 1.4	.8621, 19°.5	Glinzer and A. C. P. 1
"	"	.7543 } 136°.5	Schiff. Ber. 1
"	"	.7545 } 136°.5	
"	"	.8488, 16°	Gladstone. 249.
"	"	.854, 24°.5	Colson. An 6, 86.
"	"	.80215 } 86°.9	Taken at d pressures, t°. bein boiling p the press served. beck. Z 1. 656.
"	"	.80189 } 86°.9	
"	"	.78341, 106°.9	
"	"	.78310, 107°.1	
"	"	.77292, 119°.2	
"	"	.75968 } 129°.6	
"	"	.75983 } 129°.6	
"	"	.75429 } 137°.1	
"	"	.75421 } 137°.1	
"	"	.75306 } 138°.4	
"	"	.75303 } 138°.4	
"	"	.8801, 0°	Pinette. A. 243, 50.
"	"	.7558, 138°	
Ethylbenzene	$C_6 H_5 . C_2 H_5$	.8664, 22°.5	Fittig and A. C. P. 1
"	"	.8760, 9°.9	Schiff. G. 13, 177.
"	"	.7611 } 135°.8	
"	"	.7612 } 135°.8	
"	"	.88316, 0°	Weger. A. 221, 61.
"	"	.7612, 136°.5	
"	"	.8673, 20°	Brühl. A. 235, 1.
Trimethylbenzene Mesitylene.	$C_6 H_3 (C H_3)_3$. 1.3.5.	.863, 13°	Schwanert.

Name.	Formula.	Sp. Gravity.	Authority.
ethylbenzene. Mesitylene.	$C_6H_3(CH_3)_3$	.8643, 0° / .8530, 15°	Warren. J. 18, 515.
"	"	.8694, 9°.8 / .7372, 164°.5	Schiff. G. C. I. 13, 177.
"	"	.8558, 20°	Brühl. Bei. 4, 781.
"	"	.8632, 19°	Gladstone. Bei. 9, 249.
" Pseudocumene	" 1.3.4	.8901, 0°	Konowalow. Ber. 20, ref. 570.
omethylethylbenzene	$C_6H_4.CH_3.C_2H_5$. 1.2	.8731, 16°	Claus and Mann. Ber. 18, 1122.
amethylethylbenzene	" 1.3	.869, 20°	Wroblevsky. A. C. P. 192, 198.
methylethylbenzene	" 1.4	.8694, 11°.3	Schiff. G. C. I. 13, 177.
"	"	.7393 162°	Schiff. G. C. I. 13, 177.
"	"	.7394 162°	Schiff. G. C. I. 13, 177.
"	"	.864, 20°	Anschütz. A. C. P. 235, 314.
pylbenzene	$C_6H_5.C_3H_7$	.881, 0°	Paterno and Spica. Ber. 10, 294.
"	"	.88009, 0°	Spica. J.C.S. 36, 631.
"	"	.8692, 17°	Wispek and Zuber. A. C. P. 218, 380.
"	"	.8702, 9°.8 / .7399, 158°.5	Schiff. G. C. I. 13, 177.
propylbenzene. Cumene.	"	.87	Pelletier and Walter. Ann. (2), 67, 269.
" "	"	.8792, 0° / .8675, 15°	Warren. J. 18, 515.
" "	"	.87976, 0° / .85870, 25° / .83756, 50° / .81585, 75° / .79824, 100°	Pisati and Paterno. J. C. S. (2), 12, 686.
" "	"	.86576, 17°.5	Liebmann. Ber. 18, 46.
" "	"	.8776, 0° / .8577, 25° / .87798, 0° / .85766, 25°	Two preparations. Silva. B. S. C. 43, 317.
" "	"	.8432, 12°	Gladstone. Bei. 9, 249.
amethylbenzene	$C_6H_2(CH_3)_4$	.8816, 9°	Knublauch. Tübingen Inaug. Diss., 1872.
ethylethylbenzene	$C_6H_3(CH_3)_2C_2H_5$. 1.2.4.	.8783, 20°	Ernst and Fittig. A. C. P. 139, 192.
"	" 1.3.5	.8644, 20°	Jacobsen. B. S. C. 24, 73.
"	" "	.861, 20°	Wroblevsky. A. C. P. 192, 217.
"	" 1.3.4	.8686, 20°	Anschütz. A. C. P. 235, 324.
ylbenzene	$C_6H_4(C_2H_5)_2$. 1.4	.8707, 15°.5	Fittig and König. A. C. P. 144, 285.
methylpropylbenzene	$C_6H_4.CH_3.C_3H_7$. 1.3	.863, 16°	Claus and Stuesser. Ber. 18, 899.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORI
Metamethylpropylbenzene.	$C_6H_4.CH_3.C_3H_7$. 1.3.	.8728, 0°	Spica. Ber.
"	" "	.864. 9°.8	Schiff. G. (177.
"	" "	.7248, 175°.4	
Paramethylpropylbenzene. Cymene.	" 1.4.	.860, 14°	Gerhardt ar hours. A. (345.
"	" "	.857, 16°	Nord. A. C 281.
"	" "	.8778, 0°	Kopp. A. C 257.
"	" "	.8678, 12°.6	
"	" "	.8660, 15°	Mendelejeff.
"	" "	.8664, 20°	Williams. J 15, 120.
"	" "	.8697, 0°	From cumn Warren. Amer. A 154.
"	" "	.8724, 0°	
"	" "	.8592, 14°	
"	" "	.8705, 0°	From cumn Louguinine (4), 11, 453. values giv intermediat
"	" "	.8544, 20°	
"	" "	.8302, 50°	
"	" "	.7893, 100°	
"	" "	.8732, 0°	From cam Louguinine (4), 11, 453. values giv intermediat
"	" "	.8574, 20°	
"	" "	.8333, 50°	
"	" "	.7919, 100°	
"	" "	.8708, 0°	From two s Beilstei Kupffer. S. (2), 12.
"	" "	.8572, 20°.2	
"	" "	.8732, 0°	
"	" "	.8707, 0°	Beilstein and ffer. A. C. 295.
"	" "	.86	Gladstone. J (2), 11, 609
"	" "	.8424	Ext. of 8, fr ferent s Gladstone S. (2), 11.
"	" "	.8438	
"	" "	.858, 16°	Orlowsky. B 21, 821.
"	" "	.87446, 0°	From cumm Pisati and no. J. C. 12, 686.
"	" "	.85457, 25°	
"	" "	.82352, 50°	
"	" "	.81409, 75°	
"	" "	.79307, 100°	
"	" "	.87227, 0°	From cymyla Pisati and no. J. C. 12, 686.
"	" "	.85258, 25°	
"	" "	.82352, 50°	
"	" "	.81209, 75°	
"	" "	.79129, 100°	
"	" "	.87224, 0°	From campho sati and P J. C. S. (686.
"	" "	.85237, 25°	
"	" "	.83251, 50°	
"	" "	.81230, 75°	
"	" "	.79122, 100°	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
thylpropylben- Cymene.	$C_6H_4.CH_3.C_3H_7$. 1.4.	.86542, 0°	From thyme oil. Pisati and Paterno. J. C. S. (2), 12, 686.
"	" "	.78429, 100°	
"	" "	.8598, 15°	From two sources. Kraut. A. C. P. 192, 224.
"	" "	.8782, 0°	
"	" "	.8595, 15°	
"	" "	.8718, 0°	Jacobsen. Ber. 11, 1060.
"	" "	.86085, 10°	
"	" "	.873, 0°	Febve. Ber. 14, 1720.
"	" "	.8720, 20°	Kanonnikoff. Bei. 7, 542.
"	" "	.7248, 176°.2	Schiff. Ber. 15, 2974.
"	" "	.8569	Brühl. A.C.P. 235, 1.
"	" "	.8551, 21°	Gladstone. J. C. S. 49, 628.
isopropylbenzene	"	.86948, 0°	Silva. B. S. C. 43, 817.
"	"	.86211, 25°	
"	"	.8702, 0°	Jacobsen. Ber. 12, 431.
enzene	$C_6H_5.C_4H_9$	.8622, 16°	Radziszewski. Ber. 9, 260.
"	"	.875, 0°	Balbiano. Ber. 10, 296.
"	"	.864, 15°	
"	"	.794, 99°.8	
rlbenzene	"	.8577, 16°	Riess. Z. C. 14, 3.
" α	"	.89, 15°	Radziszewski. Ber. 9, 260.
" β	"	.8726, 16°	
diethylbenzene	$C_6H_3.CH_3(C_2H_5)_2$. 1.3.5.	.8790, 20°	Jacobsen. B. S. C. 24, 74.
ylpropylbenzene Laurene.	$C_6H_2(CH_3)_2C_3H_7$	.887, 10°	Fittig, Köbrich, and Jilke. J. 20, 701.
hylpropylbenzene	$C_6H_4.C_2H_5.C_3H_7$. 1.3.	.8588, 19°	Renard. Ann. (6), 1, 228.
enzene	$C_6H_5.CH(C_2H_5)_2$	.8751, 0°	Lippmann and Louguinine. J. 20, 667.
"	"	.8731, 21°	Dafert. M. C. 4, 617.
"	$C_6H_5.C(CH_3)_2.C_2H_5$	.8728, 0°	Essner. Ber. 14, 2582.
"	$C_6H_5(CH_2)_4(CH)_3$	.8602, 22°	Schramm. A. C. P. 218, 389.
lbenzene	$C_6H_5.CH_2.CH_2.CH(CH_3)_2$.	.859, 12°	Tollens and Fittig. A. C. P. 131, 303.
oamylmethylben-	$C_6H_4.CH_3.C_5H_{11}$. 1.2.	.8945	Pabst. B. S. C. 25, 337.
amylmethylben-	" 1.4.	.8643, 9°	Bigot and Fittig. J. 20, 667.
opylisopropylben-	$C_6H_4(C_3H_7)_2$. 1.4	.8713, 0°	Paterno and Spica. Ber. 10, 1746.
rlbenzene	$C_6H_5.C_6H_{13}$	.8568, 16°	Schramm. A. C. P. 218, 391.
methylbenzene	$C_6H_3(CH_3)_2.C_5H_{11}$	.8951, 9°	Bigot and Fittig. J. 20, 667.
octylbenzene	$C_6H_5.C_8H_{17}$	.849, 15°	Schweinitz. Ber. 19, 642.
"	"	.852, 14°	Ahrens. Ber. 19, 2718.
[illegible]	$C_6H_4(C_5H_{11})_2$	.8868, 0°	A. Austin. B. S. C. 32, 13.

5th. Miscellaneous Aromatic Hydrocarbons.

NAME.	FORMULA.	SP. GRAVITY.	AUTHO
Allylbenzene	$C_6H_5.C_3H_5$	.9180, 15°	Perkin. /(211.
Isopropylvinylbenzene	$C_6H_4.C_3H_7.C_2H_3$	.8902, 15°	"
Isopropylallylbenzene	$C_6H_4.C_3H_7.C_3H_5$	.890, 15°	"
Isopropylbutenylbenzene	$C_6H_4.C_3H_7.C_4H_7$	.8875, 15°	"
Phenylacetylene	$C_2H.C_6H_5$	.94658, 0°	Weger. 221, 61.
"	"	.80832, 141°.6	
"	"	.9295, 20°	Brühl. A 235, 1.
Ethylphenylacetylene	$C_2.C_2H_5.C_6H_5$	.928, 21°	Morgan. J. 1, 168.
Cinnamene. (Styrolene)	$C_2H_3.C_6H_5$	.928, 16°	E. Kopp. 37, 283.
	"	.924	Blyth and B A. C. P.
" "	"	.876 } 16°	Scharling. 97, 186.
	"	.896 } 16°	
" "	"	.912, 15°	Perkin. J. 660.
" "	"	.911 } 0°	From di sources. Ber. 11, 1
" "	"	.912 } 0°	
" "	"	.915 } 0°	
" "	"	.925 } 0°	
" "	"	.926 } 0°	
" "	"	.7926, 143°	Schiff. G. 177.
" "	"	.9251, 0°	Weger. A 221, 61.
" "	"	.7914, 146°.2	
" "	"	.90595, 17°	Nasini an heimer. 15, 50.
" "	"	.9084	Gladstone. 45, 241.
" "	"	.9409, 11°	
" "	"	.9074, 20°	Brühl. A 235, 1.
Metacinnamene	$(C_8H_8)_n$	1.054, 13°	Scharling. 97, 186.
Dicinnamene	$C_{16}H_{16}$	1.027, 0°	Erdmann. 216, 189.
"	"	1.016, 15°	
Phenylbutylene	$C_4H_7.C_6H_5$	.9015, 15°.5	Aronheim. 19, 258.
"	"	.8864, 12°.1	Nasini. Be
Phenylpentylene	$C_5H_9.C_6H_5$	.8458, 23°	Dafert. M.
Phenylisopentylene	"	.878, 16°	Schramm. 218, 394.
Tetraphenylethane	$C_2H_2(C_6H_5)_4$	1.179	Schröder. 2516.
"	"	1.184	
Phenyltolylethane	$C_2H_4.C_6H_5.C_7H_7$	.98	Bandrowsk C. 28, 78
Ditolylethane	$C_2H_4(C_7H_7)_2$	.974, 20°	Anschütz. 235, 315.
Dixylylethane	$C_2H_4(C_8H_9)_2$	.966, 20°	Anschütz. 235, [illegible]

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
›ropane	$C_3H_6(C_6H_5)_2$	.9956, 0°	Silva. Ber. 12, 2270.
	"	.9205, 100°	
otoluene	C_7H_{12}	.797, 18°	Renard. Ann. (6), 1, 223.
:oxylene	C_8H_{14}	.814, 0°	Wreden. A. C. P. 163, 337.
	"	.8158	Renard. Ann. (6), 1, 228.
›benzene	C_6H_{12}	.76, 0°	Wreden. J. R. C. 5, 350.
otoluene	C_7H_{14}	.772, 0°	Wreden. Ber. 10, 713.
	"	.758, 20°	
	"	.742, 20°	Renard. Ann. (6), 1, 228.
	"	.7741, 0°	Lossen and Zander. A. C. P. 225, 109.
	"	.7587, 19°	
	"	.6896, 96°.5	
:oxylene. (B. 137°.6.)	C_8H_{16}	.7956, 4°	Schiff. Ber. 18, 1407.
(B. 121°.5)	"	.764, 19°	Renard. Ann. (6), 1, 228.
roisoxylene.	"	.781, 0°	Wreden. Ber. 10, 712.
" (B. 118°)	"	.765, 20°	
"	"	.777, 0°	Wreden. J. C. S. (2), 12, 258.
"	"	.7814, 0°	Lossen and Zander. A. C. P. 225, 109.
"	"	.7665, 19°.3	
"	"	.6781, 118°	
rocumene	C_9H_{18}	.787, 20°	Renard. Ann. (6), 1, 228.
ropseudocumene	"	.7812, 0°	Konowaloff. Ber. 20, ref. 571.
"	"	.7667, 20°	
rocymene	$C_{10}H_{20}$	.8116, 17°	Renard. Ann. (6), 1, 228.
·lene	C_7H_8	1.106, 35°	Gladstone and Tribe. J. C. S. 47, 448.
l	$C_{12}H_{10}$	1.160	Schröder. Ber. 14, 2516.
	"	1.169	
	"	.9961, 70°.5	Schiff. A. C. P. 223, 247.
ylbenzene	$C_6H_3(C_6H_5)_3$	1.205	Schröder. Ber. 14, 2516.
"	"	1.206	
luene	$C_6H_4.CH_3.C_6H_5$. 1.4	1.015, 27°	Carnelley. J. C. S. (2), 14, 18.
hylbenzene	$C_6H_4.C_2H_5.C_7H_7$. 1.4	.985, 18°.9	Walker. Ber. 5, 686.
zyltoluene	$C_6H_4.CH_3.C_7H_7$. 1.3	.997, 17°.5	Senff. A. C. P. 220, 223.
zyltoluene	" 1.4	.995, 17°.5	Zincke. A. C. P. 161, 98.
itoluene	$C_6H_3.CH_3(C_7H_7)_2$	1.049	Weber and Zincke. J. C. S. (2), 13, 155.
ylene	$C_6H_3(CH_3)_2C_6H_5$	1.01, 0°	Barbier. J. C. S. (2), 13, 62.
mene	$C_{10}H_{13}.C_7H_7$	.987, 0°	Mazzara. Ber. 12, 384.
ylbenzene	$C_{22}H_{28}$	.9601, 28°	Dafert. M. C. 4, 625.
tolylene ?	$C_{14}H_{12}$	1.0032, 18°	Lippmann. Ber. 19, ref. 744.

Name.	Formula.	Sp. Gravity.	Autho
Ditolyl	$C_{14} H_{14}$	.9172, 121°	Schiff. A 223, 247.
Dibenzyl	"	1.002, 14°	Limpricht 593.
"	"	.9945, 10°.5	Fittig. A 139, 178.
"	"	1.0423, 52°.3	Schiff. A 223, 247.
Dixylylene	$C_{16} H_{16}$	.9984, 22°	Lippmann. ref. 744.
Naphthalene. l.	$C_{10} H_8$	.9774, 79°.2	Kopp. A. 307.
" "	"	.9628, 99°.2	Alluard.
" s.	"	1.15178, 19°	Vohl.
" "	"	1.153, 18°	Watts' Dic
" "	"	1.048	Ure. Gm.
" "	"	1.321 } 4°	Schröder. 1611.
" "	"	1.341 } 4°	
" l.	"	.8779, 218°	Ramsay. 39, 65.
" "	"	.9777, 79°.2	Schiff. A 223, 247.
" "	"	.982, 79° }	Lossen and A. C. P.
" "	"	.8674, 217°.1 }	
" "	"	.96208, 98°.4	Nasini an heimer. 15, 50.
Methylnaphthalene	$C_{10} H_7 . C H_3$	1.0287, 11°.5	Fittig and A. C. P.
"	"	1.0042, 22°	Reingruber P. 206, 3
Dimethylnaphthalene	$C_{10} H_6 (C H_3)_2$	1.0176, 20°	Giovanozzi 42, 853.
"	"	1.0283, 0° }	Cannizza Carnelu S. 44, 8
"	"	1.10199, 12° }	
"	"	1.01803, 16°.4	Nasini ar heimer. 15, 50.
"	"	1.01058, 27°.7	
"	"	.97411, 77°.7	
Ethylnaphthalene	$C_{10} H_7 . C_2 H_5$	1.0184, 10°	Fittig and A. C. P.
"	"	1.0204, 0° }	Carnelutti. 1672.
"	"	1.0123, 11°.9 }	
Isopropylnaphthalene	$C_{10} H_7 . C_3 H_7$	.990, 0°	Roux. An 319.
Amylnaphthalene	$C_{10} H_7 . C_5 H_{11}$	.973, 0°	Roux. An 321.
Naphthalene tetrahydride	$C_{10} H_8 . H_4$	.981, 12°	Graebe. B. 205.
" "	"	.995, 0°	Wreden an wicz. Be
Naphthalene hexhydride	$C_{10} H_8 . H_6$	.952, 0°	"
" "	"	.9419, 0° }	Lossen and A. C. P.
" "	"	.7809, 200° }	
" "	"	.94887, 16°.4 }	Nasini [illegible] [illegible] M
" "	"	.95807, 18°.4 }	

Name.	Formula.	Sp. Gravity.	Authority.
halene octohydride.	$C_{10}H_8.H_8$	.910, 0°	Wreden and Znatowicz. Ber. 9, 1607.
halene decahydride	$C_{10}H_8.H_{10}$	.857, 0°	" "
halene dodecahyde.	$C_{10}H_8.H_{12}$	.802, 0°	" "
tylnaphthalene hydride.	$C_{12}H_{12}.H_6$	.92194, 19°.8	Nasini and Bernheimer. G. C. I. 15, 50.
azylnaphthalene	$C_{10}H_7.C_7H_7$	1.166	Miquel. Ber. 9, 1034.
"	"	1.165, 0°	Vincent and Roux. B. S. C. 40, 163.
azylnaphthalene	"	1.176, 0°	" "
phtene	$C_{10}H_6.C_2H_4$	1.0300, 103°	Schiff. A. C. P. 228, 247.
racene	$C_{14}H_{10}$	1.147	Reichenbach. Watts' Dict.
anthrene	"	1.0630, 100°.5	Schiff. A. C. P. 228, 247.
anthrene tetrahyde.	$C_{14}H_{10}.H_4$	1.067, 10°.2	Graebe. J. C. S. (2), 14, 70.
ne	$C_{14}H_{12}$	.9707, 119°.2	Schiff. A. C. P. 228, 247.
e. Solid	$C_{18}H_{18}$	1.104 } 16°	Ekstrand. A. C. P. 185, 78.
"	"	1.110 } 16°	
"	"	1.132 } 16°	
"	"	1.152 } 16°	
"	"	1.162 } 16°	
Fused	"	1.063	
"	"	1.067	
"	"	1.074	
"	"	1.077	
"	"	1.087	
"	"	1.093	

6th. Terpenes.

Name.	Formula.	Sp. Gravity	Authority.
turpentine	$C_{10}H_{16}$	.8902, 0°	Frankenheim. J. 1, 68.
"	"	.8555 } 20°	Four different samples. Gladstone. J. C. S. 17, 1.
"	"	.8600 } 20°	
"	"	.8614 } 20°	
"	"	.8644 } 20°	
" B. 168°.2	"	.7283, 168°.2	Schiff. Bei. 9, 559.
Abies Reginæ-Ama-	"	.868	Buchner and Theil. J. 17, 536.
Pinus abies	"	.856, 20°	Wöhler. Gm. H.
" "	"	.880, 15°	Blanchet and Sell. Gm. H.
[illegible] maritima	"	.864, 16°	Berthelot. J. 6, 519.
" " B. 179°.8	"	.8639, 0°	Flawitzky. Ber. 12, 2357.
" "	"	.8486, 20°	
[illegible] picea	"	.859, 6°	Flückiger. J. 8, 643.

NAME.	FORMULA.	SP. GRAVITY.	AUTHO
From Pinus pumilio	$C_{10}H_{16}$	.875, 17°	Buchner.
From Pinus sylvestris. B. 171°.	"	.8652°, 15°	Tilden. J 80.
" " " B. 156°.	"	.8746, 0°	Flawitzky. 1846.
" " " "	"	.8621, 16°	
" " " "	"	.8547, 24°.5	
" " "	"	.8764, 0°	Flawitzky. 1956.
" " "	"	.8600, 20°	
Terpene ?	"	.7421 } 156°.1	Schiff. G. 177.
"	"	.7422	
" ?	"	.8587, 20°	Kanonniko 7, 592.
"	"	.8711, 10°.2	Gladstone. 49, 623.
Isoterpene	"	.8443, 20°	Kanonniko 7, 592.
"	"	.8627, 0°	Flawitzky. 1961.
"	"	.8480, 20°	
Thuja terpene. B. 160°	"	.852, 15°	Jahns. Ber.
From Sequoia. B. 155°	"	.8522, 15°	Lunge and kauler. 2204.
Terebilene. B. 134°	"	.843	Watts' Dict
Australene. B. 157°	"	.8631, 16°	Atterberg. 1203.
Terebenthene. B. 157°	"	.871, 17°.5	Atterberg. 2581.
"	"	.8767, 0°	Riban. B. 173.
"	"	.8601, 20°	
"	"	.8436, 40°	
"	"	.8270, 60°	
"	"	.8105, 80°	
"	"	.7939, 100°	
"	"	.8812, 0°	Barbier. C 1066.
"	"	.8815, 0°	
"	"	.8724, 12°	
" From camphor oil	"	.8641, 15°	Yoshida. J 47, 779.
Terebene	"	.8718	Pierre. J.
"	"	.8645, 5°–10°	Regnault. 62, 50.
"	"	.8605, 10°–15°	
"	"	.8564, 15°–20°	
" B. 160°	"	.8583, 20°	Gladstone. 17, 1.
"	"	.8767, 0°	Riban. B. 173.
"	"	.8600, 20°	
"	"	.8433, 40°	
"	"	.8267, 60°	
"	"	.8100, 80°	
"	"	.7933, 100°	
" B. 156°	"	.8264, 15°	Orlowsky. 21, 321.
Isoterebenthene. B. 175°	"	.8432, 22°	Berthelot. J
"	"	.8586, 0°	Riban. C. R
"	"	.8427, 20°.28	
"	"	.8273, 40°.19	
"	"	.8131, 58°.32	
"	"	.7964, 79°.24	

Name.	Formula.	Sp. Gravity.	Authority.
nthene	$C_{10}H_{16}$	.7793, 100°	Riban. C. R. 79, 314.
:. Laevorotatory	"	.8672, 0°	Bouchardat and Lafont. C. R. 102, 50.
ene. B. 177°	"	.8526, 15°	Tilden. C. N. 37, 166.
e. B. 178	"	.93, 0°	Walitzky. Ber. 15, 1086.
------------	"	.855	Wallach. A. C. P. 230. 260.
ne. B. 175°	"	.8612, 16°	Atterberg. Ber. 10, 1206.
------------	"	.8598, 17°.5	Atterberg. Ber. 14, 2531.
------------	"	.8658, 14°	Gladstone. Bei. 9, 249.
yrolene. B. 177°	"	.847	Watts' Dictionary.
of neroli. B. 178°	"	.8466, 20°	Gladstone. J. C. S. 17, 1.
l of orange	"	.835	Soubeiran and Capitaine.
" " B. 174°	"	.8460 } 20°	Gladstone. J. C. S. 17, 1.
" "	"	.8468	
l of petit grain	"	.8470, 20°	" "
itrus lumia	"	.853, 18°	Luca. J. 13, 479.
itrus bigaradia	"	.8520, 10°	Luca. C. R. 45, 904.
" "	"	.8517, 12°	
itrus medica	"	.8514, 15°	Berthelot. J. 6, 521.
" "	"	.8466, 20°	Gladstone. J. C. S. 17, 1.
tron	"	.8597, 5°—10°	Regnault. P. A. 62, 50.
"	"	.8558, 10°—15°	
"	"	.8518, 15°—20°	
erpene	"	.8598 } 9°.9	Schiff. Ber. 19, 560.
"	"	.8595	
"	"	.7279 } 168°	
"	"	.7285	
"	"	.7286	
l of lemon	"	.84	Zeller. Watts' Dict.
" "	"	.86	
" "	"	.8380 } 0°	Frankenheim. Two samples. J. 1, 68.
" "	"	.8661	
" " B. 173°	"	.8468, 20°	Gladstone. J. C. S. 17, 1.
B. 165°	"	.8569	Blanchet and Sell. Gm. H.
l of bergamot	"	.856	Ohme. A. C. P. 31, 316.
" "	"	.8464 } 20°	Gladstone. J. C. S. 17, 1.
" "	"	.8466	
ene	"	.8483	Gladstone. Bei. 9, 249.
of angelica	"	.8487	Müller. Ber. 14, 2483.
" " B. 175°	"	.833, 0°	Naudin. Ber. 15, 254.
" " B. 158°	"	.8609 } 16°.5	Beilstein and Wiegand. Ber. 15, 1741.
" " B. 178°	"	.8504	
" " B. 176°	"	.8481	

Name.	Formula.	Sp. Gravity.	Authori[ty]
Cynene. B. 182°	$C_{10}H_{16}$	.85384, 16°	Wallach and A. C. P. 2
From cyneol. B. 179°	"	.85652	"
" "	"	.85959	
Fellandrene	"	.8558, 10°	Pesci. G. C. 225.
Gaultherilene	"	.8510, 20°	Gladstone. 17, 1.
Geraniene	"	.842, 20°	Jacobsen. Z 171.
"	"	.843, 20°	
Licarene	"	.835, 18°	Morin. J. C 737.
Macene	"	.8529, 17°.5	Schacht. J.
Olibene	"	.863, 12°	Kurbatow. Z 201.
Safrene	"	.8345, 0°	Grimaux an[d] otte. J. 2
Tolene	"	.858, 10°	E. Kopp. J.
Polymer of isoprene	"	.866, 0°	Bouchardat. 904.
" "	"	.854, 21°	
Polymer of valerylene	"	.886, 15°	"
From oil of calamus	$C_{15}H_{24}$	.9180, 20°	Gladstone. J 17, 1.
" " "	"	.9275, 20°	
" " "	"	.942, 0°	Kurbatow. A 173, 1.
From oil of cascarilla	"	.9212, 20°	Gladstone. J 17, 1.
From oil of cedar	"	.9231, 18°	Gladstone. 249.
From oil of cloves	"	.918, 18°	Ettling. Dict.
" " "	"	.9016, 14°	Williams. J.
" " "	"	.9041, 20°	Gladstone. J 17, 1.
" " "	"	[illegible], 15°	Church. J. (2), 13, 115.
From oil of copaiva	"	[illegible]	Posselt. J. 2
" " "	"	[illegible]	Soubeiran and
" " "	"	[illegible]	itaine. Gm
" " "	"	[illegible], 24°	Levy. Ber. 18
From oil of cubebs	"	[illegible]	
" " "	"	[illegible]	Schmidt.
" " "	"	[illegible]	
" " "	"	[illegible], 20°	Gladstone. J 17, 1.
" " "	"	[illegible]	Oglialoro. 1357.
[illegible]	"	[illegible]	Walter. An 1, 501.
[illegible]		[illegible]	Muir. J. C. S.
[illegible]		[illegible]	Gladstone. J 2 . 10, 1.
[illegible]		[illegible]	Lallemand. 508.
[illegible]		[illegible]	Werner. J.
[illegible]		[illegible]	[illegible]. J. C 284.
[illegible]		[illegible]	[illegible]. J. [illegible]

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Didecene	$C_{20} H_{36}$	.9362, 12°	Renard. C. R. 106, 1086.
Caoutchene	$C_4 H_8$	.65, —2°	Bouchardat. A. C. P. 37, 30.
Tropilidene	$C_7 H_8$	.9129, 0°	Ladenburg. A. C. P. 217, 138.
From copper camphorate	$C_8 H_{14}$	.793	Moitessier. J. 19, 410.
From decomposition of phenol.	$C_{10} H_{12}$	1.012, 17°.5, s.	Roscoe. J. C. S. 47, 669.
Eucalyptene	$C_{12} H_{18}$	.836, 12°	Cloëz. J. 23, 588.
Anthemene	$C_{18} H_{36}$	.942, 15°	Naudin. B. S. C. 41, 483.
Paranicene	$C_{10} H_{12}$	1.24	St. Evre. J. 1, 582.
Lekene	?	.93917	Beilstein and Wiegand. Ber. 16, 1548.
Könlite	$(C_6 H_6)_n$	.88	Trommsdorf. A. C. P. 21, 126.
Hartite	$(C_3 H_5)_n$	1.046	Haidinger. P. A. 54, 261.
From petroleum	$(C_7 H_4)_n$	1.096, 15°	Prunier. Ann. (5), 17, 5.
Carbopetrocene	$(C_{10} H_2)_n$ or $(C_{12} H_2)_n$	1.235, 10°	" "

XLVI. COMPOUNDS CONTAINING C, H, AND O.

1st. Alcohols of the Paraffin Series.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Methyl alcohol	$C H_4 O$	.798, 20°	Dumas and Peligot. Ann. (2), 58, 5.
" "	"	.807, 9°	Deville.
" "	"	.813	Regnault.
" "	"	.82704, 0°	Pierre. Ann. (3), 15, 325.
" "	"	.7938, 25°	Kopp. A. C. P. 55, 166.
" "	"	.81796, 0°	Kopp. P. A. 72, 58.
" "	"	.80307, 16°.9	
" "	"	.8065, 15°	Mendelejeff. J. 13, 7.
" "	"	.8052, 9°.5	Delffs. J. 7, 26.
" "	"	.8142, 0°	Kopp. A. C. P. 94, 257.
" "	"	.7997, 16°.4	
" "	"	.7973, 15°	Graham.
" "	"	.7995, 15°	Duclaux. Ann. (5), 13, 86.
" "	"	.8574, 21°	Linnemann. J. 21, 681.
" "	"	.81571, 10°	Dupré. P. A. 148, 236.
" "	"	.7964, 20°	Landolt.

Name.	Formula.	Sp. Gravity.	Authori
Methyl alcohol	CH_4O	.7997, 15°	Grodzki and mer. Z. A. 103.
" "	"	.7984, 15°	Krämer and zki. Ber.
" "	"	.8098, 0°	Vincent and I anal. J. 18
" "	"	.8014, 14°	De Heen. Bei.
" "	"	.7475 } 61°.8	Schiff. G. C 177.
" "	"	.7477 } 61°.8	
" "	"	.7958, 20°	Brühl. Bei.
" "	"	.8111, 0°	Zander. A. 224, 88.
" "	"	.7483, 66°.2	
" "	"	.810, 15°	Regnault and jean. C. R.
" "	"	.7961, 18°	Gladstone. 249.
" "	"	.7928, 20°	Winkelmann (2), 26, 105
" "	"	.7981, 20°	Traube. Ber.
" "	"	.8612, 0°	Pagliani and telli. Bei.
" "	"	.78909, 22°.94	Values giv every 10° fr to 238°.5. B and Young 178, 818.
" "	"	.7185, 100°	
" "	"	.6494, 150°	
" "	"	.5525, 200°	
" "	"	.3642, 288°.5	
Ethyl alcohol*	C_2H_6O	.7924, 17°.9	Gay Lussac.
" "	"	.7915, 18°	Dumas and B P. A. 12, 9
" "	"	.8095, 0°	Darling.
" "	"	.7996, 15°	Kopp. A. C. 166.
" "	"	.8150, 5°—10°	Regnault. 62, 50.
" "	"	.8113, 10°—15°	
" "	"	.8072, 15°—20°	
" "	"	.81087 } 0°	Kopp. P. A.
" "	"	.8095 } 0°	
" "	"	.79821, 14°	
" "	"	.7990, 14°.8	
" "	"	.8151, 0°	Pierre. Am 15, 325.
" "	"	.7938, 15°.5	Fownes. P. T 249.
" "	"	.7897 } 21°	Wackenroder 682.
" "	"	.7905 } 21°	
" "	"	.79381, 15°.6	Drinkwater. 682.
" "	"	.809, 5°	Delffs. J. 7,
" "	"	.8194, 19°	Wetherill. J 60, 202.
" "	"	.7947, 15°	Pouillet. J.
" "	"	.7958, 15°	Mendelejeff.
" "	"	.8083, 0°	Mendelejeff. 20.
" "	"	.7157, 99°.9	

* For this compound there are so many determinations of specific gravity that a pleteness with regard to them has not been attempted by the compiler.

Name.	Formula.	Sp. Gravity.	Authority.
alcohol	C_2H_6O	.6796, 130°.9	Mendelejeff. J. 14, 20.
"	"	.7946 } 15°	Baumhauer. J. 13, 393.
"	"	.7947	
"	"	.80625, 0°	Mendelejeff. J. 18, 469.
"	"	.80207, 5°	
"	"	.79788, 10°	
"	"	.79367, 15°	
"	"	.78945, 20°	
"	"	.78522, 25°	
"	"	.78096, 30°	
"	"	.8086, 19°	Linnemann. J. 21, 413.
"	"	.8090, 17°	Linnemann. A.C.P. 160, 195.
"	"	.822, 20°	Pierre and Puchot. Ann. (4), 22, 260.
"	"	.79481, 11°	Erlenmeyer. A.C.P. 162, 374.
"	"	.815, 0° 5°	Pierre. C. N. 27, 93.
"	"	.80214, 1	
"	"	.7946, 16°.03	Winkelmann. P. A. 150, 592.
"	"	.7339, 78°	Ramsay. J.C.S. 35, 463.
"	"	.8120, 0°	Vincent and Delachanal. J. 1880, 396.
"	"	.7995, 14°	De Heen. Bei. 5, 105.
"	"	.8019, 20°	Bedson and Williams. Ber. 14, 2550.
"	"	.7976, 25°	
"	"	.7381 } 78°.2	Schiff. G. C. I. 13, 177.
"	"	.7382	
"	"	.7402 } 78°.3	
"	"	.7405	
"	"	.7968, 20°	Nasini. G. C. I. 13, 135.
"	"	.8000, 20°	Brühl. Bei. 4, 781.
"	"	.79603, 17°.86	Also intermediate values. Drecker. P. A. (2), 20, 870.
"	"	.77616, 40°.90	
"	"	.7882, 25°.3	Schall. Ber. 17, 2555.
"	"	.7899, 23°.4	
"	"	.79326, 15°	Squibb. C. N. 51, 33.
"	"	.7906, 20°	Winkelmann. P. A. (2), 26, 105.
"	"	.79175, 0°	Pagliani and Battelli. Bei. 10, 222.
"	"	.70606, 110°	Intermediate values given. Ramsay and Young. P. T. 1886, 129.
"	"	.5570, 200°	
"	"	.3109, 242°.9	
l alcohol	C_3H_8O	.8198, 0°	Pierre and Puchot. Ann. (4), 22, 276.
"	"	.8125, 9°.6	
"	"	.7797, 50°.1	
"	"	.7494, 84°	

Name.	Formula.	Sp. Gravity.	Author
Propyl alcohol	C_3H_8O	.813, 13°	Chancel. . 151, 302.
" "	"	.812, 16°	Chapman Smith. . 22, 194.
" "	"	.823, 0°	Saytzeff. 107.
" "	"	.8205, 0°	Rossi. A. C. 79.
" "	"	.8066, 15°	Linnemann. P. 161, 26
" "	"	.8198, 0°	Pierre. C. N
" "	"	.80825, 15°	
" "	"	.8044, 20°	Brühl. Ber.
" "	"	.8091, 14°	De Heen. Be
" "	"	.8203, 0°	Naccari an liani. Be Values g several i diate t°s.
" "	"	.8127, 9°.71	
" "	"	.8001, 25°.46	
" "	"	.7898, 38°.18	
" "	"	.7773, 53°.10	
" "	"	.7646, 67°.46	
" "	"	.7550, 77°.69	
" "	"	.7385, 94°.40	
" "	"	.8177, 0°	Zander. A 214, 181.
" "	"	.7369, 97°.4	
" "	"	.8190, 20°	Pagliani. Be
" "	"	.7365 97°.1	Schiff. G. (177.
" "	"	.7366 97°.1	
" "	"	.7367 97°.1	
" "	"	.8049, 20°	Winkelman (2), 26, 10
" "	"	.8051, 20°	Traube. B 881.
Isopropyl alcohol	"	.791, 15°	Linnemann. 488.
" "	"	.7915, 16°.5	Siersch. A 144, 141.
" "	"	.7876, 16°	Linnemann. P. 161, 18
" "	"	.7887, 20°	Brühl. A. 203, 1.
" "	"	[illegible]	Duclaux. A 13, 89.
" "	"	[illegible], 0°	Zander. A. 214, 181.
" "	"	[illegible] 82°.8	
" "	"	[illegible] 82°.8	Schiff. G. (177.
" "	"	.7404	
" "	"	[illegible], 20°	Traube. Ber
Hydrate of isopropyl alcohol	C_3H_8O, H_2O	[illegible] 15°	Linnemann. P. 136, 40
" "	C_3H_8O, $2H_2O$	[illegible] 15°	"
B[illegible] alcohol [illegible]	$C_4H_{10}O$	[illegible] 0°	Saytzeff. 198.
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	Lieben and A. [illegible]
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
·l alcohol	$C_4H_{10}O$	.8112, 15°	Two samples. Linnemann. Ann. (4), 27, 268.
"	"	.8135, 22°	
"	"	.8152, 14°	De Heen. Bei. 5. 105.
"	"	.806. 15°	Pierre. C. N. 27, 93.
"	"	.8099, 20°	Two lots. Brühl. A. C. P. 203, 1.
"	"	.8096, 20°	
"	"	.8233, 0°	Zander. A.C.P. 224, 88.
"	"	.7247, 117°.5	
"	"	.7269 116°.7	Schiff. G. C. I. 13, 177.
"	"	.7270 116°.7	
butyl alcohol. B. 108°	"	.8032, 18°.5	Wurtz. A. C. P. 93, 107.
" "	"	.817, 0°	Pierre and Puchot. J. 21, 434.
" "	"	.809, 11°	
" "	"	.774. 55°	
" "	"	.732. 100°	
" "	"	.8055, 16°.8	Chapman and Smith. J. C. S. 22, 161.
" "	"	.8003, 18°	Linnemann. A.C.P. 160, 195.
" "	"	.8025, 19°	Linnemann. Ann. (4), 27, 268.
" "	"	.8167 0°	Menschutkin. A. C. P. 195, 351.
" "	"	.8168 0°	
" "	"	.8020 20°	Brühl. Ber. 13, 1520.
" "	"	.8062 20°	
" "	"	.8162, 0°	Naccari and Pagliani. Bei. 6, 89. Values given for several intermediate t°s.
" "	"	.8052, 14°.50	
" "	"	.7927, 30°.71	
" "	"	.7800, 46°.56	
" "	"	.7608, 68°.97	
" "	"	.7497, 80°.86	
" "	"	.7295, 101°.97	
" "	"	.8064, 15°	Duclaux. Ann. (5), 13, 90.
" "	"	.7265, 106°.6	Schiff. G. C. I. 13, 177.
" "	"	.8062. 20°	Landolt. Bei. 7, 846.
" "	"	.79888, 26°.15	Schall. Ber. 17, 2555.
" "	"	.77844, 52°.2	
" "	"	.8024, 20°.5	Gladstone. Bei. 9, 249.
" "	"	.8031, 20°	Winkelmann. P. A. (2), 26, 105.
" "	"	.8029, 20°	Traube. Ber. 19, 883.
Methylethylcarbinol. B. 99°.	"	.85, 0°	De Luynes. Ann. (4), 2, 424.
"	"	.827, 0°	Lieben. A. C. P. 150, 114.
"	"	.810, 22°	
Trimethylcarbinol. B. 82°.5.	"	.8075, 0°	Butlerow. Z. C. 14, 273.
"	"	.7788, 30°	
"	"	.7792, 37°	Linnemann. Ann. (4), 27, 268.
"	"	.7864, 20°	Brühl. A. C. P. 203, 1.
"	"	.7823, 24°	
"	"	.7813, 25°	

NAME.	FORMULA.	SP. GRAVITY.	AUTHO
Trimethylcarbinol. B. 82°.5.	$C_4 H_{10} O$	.7802, 26°	Brühl. A. 203, 1.
Hydrate of trimethylcarbinol.	$(C_4 H_{10} O)_2. H_2 O$	.8276, 0°	Butlerow. 273.
Normal amyl alcohol.	$C_5 H_{12} O$	.8296, 0°	Lieben an A. C. P.
" " " B. 137.	"	.8168, 20°	
" " "	"	.8065, 40°	
" " "	"	.7835, 99°.15	
" " "	"	.8282, 0°	Zander. 224, 88.
" " "	"	.7117, 137°.85	
" " "	"	.8299, 0°	Gartenmeis C. P. 233.
Amyl alcohol.* B. 131°.5.	"	.8184, 15°	Cahours. A 30, 288.
" "	"	.8137, 15°	Kopp. A. 166.
" "	"	.8271, 0°	Pierre. J.
" "	"	.8185, 15°	Rieckher.
" "	"	.8253, 0°	Kopp. P. 227.
" "	"	.8144, 15°.9	
" "	"	.8127 16°.4	
" "	"	.8145 16°.4	
" "	"	.818, 14°	Delffs. J.
" "	"	.8248, 0°	Kopp. A. 257.
" "	"	.8113, 18°.7	
" "	"	.819, 18°	Schiff.
" "	"	.8142, 15°	Mendelejeff.
" "	"	.8148 14°	From two Schorlet 19, 527.
" "	"	.8199 14°	
" "	"	.826, 0°	Pierre and Ann. (4),
" "	"	.8204, 15°	Graham.
" "	"	.8148, 15°	Duclaux. A 13, 91.
" "	"	.8135, 20°	Landolt.
" "	"	.8244, 0°	Two produ lenmeye Hell. A 160, 257.
" "	"	.8144, 15°	
" "	"	.8102, 21°.5	
" "	"	.8263, 0°	
" "	"	.8123, 19°.7	
" "	"	.8253, 0°	Pierre. C. 93.
" "	"	.8146, 15°	
" "	"	.8255, 0°	Pierre and B. S. C. 2
" " Ordinary	"	.817	Ley. Ber.
" " Less active.	"	.816, 15°	
" " More "	"	.808, 15°	
" "	"	.8123, 20°	Brühl. Bei
" "	"	.8075, 14°	De Heen. Be
" "	"	.8238, 0°	Balbiano. 1437.
" "	"	.8104, 20°	Two lots. A. C. P.
" "	"	.8103, 20°	
" "	"	.8256, 0°	Flawitzky. 11.
" "	"	.8085, 23°	

* Ordinary, inactive, and unspecified.

Name.	Formula.	Sp. Gravity.	Authority.
lcohol	$C_5 H_{12} O$	.7221 } 123°.2	Schiff. Ber. 14, 2768.
"	"	.7228 } 123°.2	
"	"	.7154, 130°.5	Schiff. G. C. I. 13, 177.
"	"	.8063, 26°.1 }	Schall. Ber. 17, 2555.
"	"	.7729, 66° }	
"	"	.8114, 20°	Winkelmann P. A. (2), 26, 105.
"	"	.8121, 20°	Traube. Ber. 19, 883.
"	"	.8252, 0°	Pagliani and Batelli. Bei. 10, 222.
ylpropylcarbinol.	"	.8249 } 0°	Wurtz. Z. C. 11, 490.
" B. 119°	"	.8260 } 0°	
"	"	.883, 0°	Le Bel. Z. C. 14, 471.
"			
	"	.8239, 0° }	Bielohoubek. Ber. 9, 925.
"	"	.8102, 20° }	
"	"	.827, 0° }	Wagner and Saytzeff. A. C. P. 179, 320.
"	"	.815, 18° }	
ylisopropylcarbinol.	"	.8308, 0° }	Winogradow. A. C. P. 191, 125.
" B. 112°	"	.8219, 19° }	
"	"	.833, 0° }	Wischnegradsky. A. C. P. 190, 340.
"	"	.819, 19° }	
ylcarbinol. B. 116°.5	"	.832, 0° }	Wagner and Saytzeff. A. C. P. 175, 368.
"	"	.819, 16° }	
"	"	.831, 0° }	Wagner and Saytzeff. A. C. P. 179, 320.
"	"	.816, 18° }	
hylethylcarbinol. B. 102°.5.	"	.829, 0°	Wurtz. A. C. P. 125, 114.
"	"	.828, 0°	Ermolaien. Z. C. 14, 275.
"	"	.8258, 0° }	Flawitzky. A. C. P. 179, 349.
"	"	.810, 19° }	
"	"	.827, 0° }	Wischnegradsky. A. C. P. 190, 334.
"	"	.812, 19° }	
"	"	.827, 17°	Münde. Ber. 7, 1370.
"	"	.7241, 101°.6	Schiff. G. C. I. 13, 177.
al hexyl alcohol. B. 157°.	$C_6 H_{14} O$	.820, 17°	Pelouze and Cahours. J. 16, 527.
" "	"	.813, 0°	Buff. J. 21, 336.
" "	"	.819	Franchimont and Zincke. C. N. 24, 263.
" "	"	.8333, 0° }	Lieben and Janecek. J. R. C. 5, 156.
" "	"	.8204, 20° }	
" "	"	.8107, 40° }	
" "	"	.813, 17°	Frentzel. Ber. 16, 745.
" "	"	.8312 } 0°	Zander. A. C. P. 224, 88.
" "	"	.8327 } 0°	
" "	"	.6958 } 157°	
" "	"	.6982 } 157°	

NAME.	FORMULA.	SP. GRAVITY.	AUTHOR
Ethylhexylcarbinol.	$C_9 H_{20} O$	.839, 0°	Wagner. I
" B. 195°	"	.825, 20°	ref. 316.
Normal decyl alcohol	$C_{10} H_{22} O$	.8389, 7°	
" " "	"	.8297, 20°	Krafft. Ber.
" " "	"	.7734, 98°.7	
Decyl alcohol. B. 200°	"	.858, 18°.5	Lemoine. I 41, 161.
Isodecyl alcohol. B. 203°	"	.8569, 0°	Borodin. J.
Propylhexylcarbinol. B. 210°.	"	.839, 0°	E. Wagner. 42, 330.
Methylnonylcarbinol. B. 228°.	$C_{11} H_{24} O$	.8268, 19°	Giesecke. Z 431.
Normal dodecyl alcohol	$C_{12} H_{26} O$	.8309, 24°	
" " "	"	.8201, 40°	Krafft. Ber.
" " "	"	.7781, 99°	
Normal tetradecyl alcohol.	$C_{14} H_{30} O$	.8236, 38°	
" " "	"	.8153, 50°	"
" " "	"	.7818, 98°.9	
Isomer of myristic alcohol. B. 270°—275°.	"	.8368, 15°	
" " "	"	.8301, 30°	Perkin, Jr.
" " "	"	.8279, 35°	S. 43, 77.
Normal hexdecyl alcohol	$C_{16} H_{34} O$	.8176, 49°.5	
" " "	"	.8105, 60°	
" " "	"	.7837, 98°.7	Krafft. Ber.
" " " Cetyl alcohol	"	.8185, 49°.5	
Normal octodecyl alcohol	$C_{18} H_{38} O$	.8124, 59°	
" " "	"	.8048, 70°	"
" " "	"	.7849, 99°.1	

2d. Oxides of the Paraffin Series.*

NAME.	FORMULA.	SP. GRAVITY.	AUTHOR
Methyl ethyl oxide	$C H_3 . C_2 H_5 . O$	.7252, 0°	Dobriner.
" " "	"	.7127, 10°.8	P. 243. I
Ethyl oxide, or ether	$(C_2 H_5)_2 O$	.7119, 24°.8	Gay Lussac.
" " "	"	.718, 20°	Dumas and I Ann. (2),
" " "	"	.733, 12°.5	Muncke. M Sav. Et. 249.
" " "	"	.73568, 0°	Kopp. P.
" " "	"	.72895, 6°.9	231.
" " "	"	.7297, 5°—10°	
" " "	"	.7241, 10°—15°	Regnault.
" " "	"	.7185, 15°—20°	62, 50.
" " "	"	.73574, 0°	Pierre. C 212.
" " "	"	.728, 7°	Delffs. J.

* All of Dobriner's ethers represent normal paraffins.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
oxide, or ether	$(C_2H_5)_2O$	.73644, 0°	Intermediate values given. Mendelejeff. A. C. P. 119, 1.
" "	"	.63987, 78°.3	
" "	"	.60896, 99°.9	
" "	"	.55958, 131°.6	
" "	"	.51735, 157°	
" "	"	.7271, 10°.2	Matthiessen and Hockin.
" "	"	.7204, 15°.8	
" "	"	.6956, 34°.5	Ramsay. J. C. S. 35, 463.
" "	"	.7157, 20°	Brühl. Ber. 13, 1530.
" "	"	.7197, 15°	Buchan. C. N. 51, 94.
" "	"	.73128, 4°	Squibb. C. N. 51, 67 and 76.
" "	"	.71888, 15°	
" "	"	.73590, 0°	Oudemans. Ber. 19, ref. 2.
" "	"	.7304, 5°	
" "	"	.7248, 10°	
" "	"	.7192, 15°	
" "	"	.7135, 20°	
" "	"	.7077, 25°	
" "	"	.7019, 30°	
" "	"	.6960, 35°	
" "	"	.6704, 50°	Also values for every 5° from 0° to 193°. Ramsay and Young. P. T. 178, 85.
" "	"	.6105, 100°	
" "	"	.5179, 150°	
" "	"	.3030, 193°	
" "	"	.2463, at critical t°.	Ramsay and Young. P. M. 1887, 458.
yl propyl oxide	$CH_3.C_3H_7.O$	.7471, 0°	Dobriner. A. C. P. 243, 1.
" "	"	.70415, 38°.9	
propyl oxide	$C_2H_5.C_3H_7.O$	.7386, 20°	Brühl. Bei. 4, 779.
" "	"	.7545, 0°	Dobriner. A. C. P. 243, 1.
" "	"	.6871, 63°.6	
isopropyl oxide	"	.7447, 0°	Markownikoff. A. C. P. 138, 374.
yl butyl oxide	$CH_3.C_4H_9.O$	.7635, 0°	Dobriner. A. C. P. 243, 1.
" "	"	.6901, 70°.3	
yl oxide	$(C_3H_7)_2O$	.7633, 0°	Zander. A. C. P. 214, 181.
"	"	.6743, 90°.7	
opyl oxide	"	.7435, 0°	" "
"	"	.6715, 69°	
l butyl oxide	$C_2H_5.C_4H_9.O$	.7694, 0°	Lieben and Rossi. A. C. P. 158, 137.
" "	"	.7522, 20°	
" "	"	.7367, 40°	
" "	"	.761, 0°	Saytzeff.
" "	"	.7680, 0°	Dobriner. A. C. P. 243, 1.
" "	"	.6785, 91°.4	
l isobutyl oxide	"	.7507, 0°	Wurtz. J. 7, 574.
yl amyl oxide	$CH_3.C_5H_{11}.O$	.6871, 91°	Schiff. Bei. 9, 559.
isoamyl oxide	$C_2H_5.C_5H_{11}.O$	.8036, 14°.7	Mendelejeff. J. 13, 7.
" "	"	.764, 18°	Reboul and Truchot. J. 20, 582.
y ethyl amyl oxide	"	.759, 21°	" "
" " "	"	.7785, 0°	Kondakoff. Ber. 20, ref. 549.
" " "	"	.751, 18°	
[illegible] oxide	$C_3H_7.C_4H_9.O$	.7773, 0°	Dobriner. A. C. P. 243, 1.
"	"	.6638, 117°.1	

Name.	Formula.	Sp. Gravity.	Authority.
Ethylhexylcarbinol.	$C_9 H_{20} O$	.839, 0°	Wagner. Ber. 17, ref. 316.
" B. 195°.	"	.825, 20°	
Normal decyl alcohol	$C_{10} H_{22} O$	.8389, 7°	
" " "	"	.8297, 20°	Krafft. Ber. 16, 1714.
" " "	"	.7734, 98°.7	
Decyl alcohol. B. 200°	"	.858, 18°.5	Lemoine. B. S. C. 41, 161.
Isodecyl alcohol. B. 208°	"	.8569, 0°	Borodin. J. 17, 338.
Propylhexylcarbinol. B. 210°.	"	.839, 0°	E. Wagner. B. S. C. 42, 330.
Methylnonylcarbinol. B. 228°.	$C_{11} H_{24} O$	.8268, 19°	Giesecke. Z. C. 13, 431.
Normal dodecyl alcohol	$C_{12} H_{26} O$	.8309, 24°	
" " "	"	.8201, 40°	Krafft. Ber. 16, 1714.
" " "	"	.7781, 99°	
Normal tetradecyl alcohol.	$C_{14} H_{30} O$	.8236, 38°	
" " "	"	.8153, 50°	" "
" " "	"	.7813, 98°.9	
Isomer of myristic alcohol. B. 270°—275°.	"	.8368, 15°	
	"	.8301, 30°	Perkin, Jr. J. C. S. 43, 77.
" " "	"	.8279, 35°	
Normal hexdecyl alcohol	$C_{16} H_{34} O$	.8176, 49°.5	
" " "	"	.8105, 60°	
" " "	"	.7887, 98°.7	Krafft. Ber. 16, 1714.
" " " Cetyl alcohol	"	.8185, 49°.5	
Normal octodecyl alcohol	$C_{18} H_{38} O$	.8124, 59°	
" " "	"	.8048, 70°	" "
" " "	"	.7849, 99°.1	

2d. Oxides of the Paraffin Series.*

Name.	Formula.	Sp. Gravity.	Authority.
Methyl ethyl oxide	$C H_3 . C_2 H_5 . O$	.7252, 0°	Dobriner. A. C. P. 243, 1.
" " "	"	.7127, 10°.8	
Ethyl oxide, or ether	$(C_2 H_5)_2 O$	.7119, 24°.8	Gay Lussac.
" " "	"	.713, 20°	Dumas and Boullay. Ann. (2), 36, 294.
" " "	"	.733, 12°.5	Muncke. M. St. P. Sav. Et. 1, 1831, 249.
" " "	"	.73568, 0°	Kopp. P. A. 72, 231.
" " "	"	.72895, 6°.9	
" " "	"	.7297, 5°—10°	
" " "	"	.7241, 10°—15°	Regnault. P. A. 62, 50.
" " "	"	.7185, 15°—20°	
" " "	"	.73574, 0°	Pierre. C. R. 27, 213.
" " "	"	.728, 7°	Delffs. J. 7, 26.

* All of Dobriner's ethers represent normal paraffins.

3d. The Fatty Acids.

Name.	Formula.	Sp. Gravity.	Authority.
ic acid	CH_2O_2	1.2353	Liebig. Gm. H.
"	"	1.2227, 0°	Kopp. P. A. 72, 248.
"	"	1.2067, 13°.7	
"	"	1.2211, 20°	Landolt. P. A. 117, 353.
"	"	1.2211, 20°	Semenoff. Ann. (4), 6, 115.
"	"	1.2165, 20°	
"	"	1.24482, 0°	Petterson. U. N. A. 1879.
"	"	1.2188, 20°	Brühl. Bei. 4, 781.
"	"	1.2415, 0°	Zander. A. C. P. 224, 88.
"	"	1.1175, 100°.8	
"	"	1.2191, 20°	Winkelmann. P. A. (2), 26, 105.
"	"	1.2182, 22°	Lüdeking. P. A. (2), 27, 72.
"	"	1.1170, 100°.3	Schiff. Ber. 19, 560.
"	"	1.2190, 20°	Traube. Ber. 19, 884.
"	"	1.22734, 15°	Perkin. J. C. S. 49, 777.
ic acid	$C_2H_4O_2$	1.0680, 16°	Mollerat. Ann. (1), 68, 88.
"	"	1.0622	Sebille-Auger. Watts' Dict.
"	"	1.0635, 15°	Mohr. A. C. P. 31, 277.
"	"	1.100, 8°.5, s.	Persoz. Watts' Dict.
"	"	1.0650, 13°, l.	
"	"	1.0647, 5°-10°	Regnault. P. A. 62, 50.
"	"	1.0591, 10°-15°	
"	"	1.0535, 15°-20°	
"	"	1.08005, 0°	Kopp. P. A. 72, 258.
"	"	1.06195, 17°	
"	"	1.0635, 10°	Delffs. A. C. P. 92, 277.
"	"	1.0607, 15°	Mendelejeff. J. 13, 7.
"	"	1.0563, 15°.5	Roscoe. J. C. S. 15, 270.
"	"	1.0565, 15°.5	
"	"	1.0514, 20°	Landolt. P. A. 117, 353.
"	"	1.05533, 15°	Oudemans. Z. C. 1866, 750.
"	"	1.0626, 20°	Linnemann. A. C. P. 160, 216.
"	"	1.0502	Landolt. Ber. 9, 907.
"	"	1.0490, 18°	Kohlrausch. P. A. 159, 240.
"	"	.9325, 113°	Ramsay. J. C. S. 35, 463.
"	"	1.0635, 15°	Duclaux. Ann. (5), 13, 95.
"	"	1.1149, 0°, s.	Petterson. U.N.A. 1879.
"	"	1.0576, 12°.79	
	"	1.0543, 15°.97	
	"	1.0503, 19°.03	

Name.	Formula.	Sp. Gravity.	Author
Acetic acid	$C_2H_4O_2$	1.0559, 20°	Bedson an liams. Ber.
" "	"	1.0495, 20°	Brühl. Be
" "	"	1.0701, 0° }	Zander. A. (88.
" "	"	.9372, 118°.1 }	
" "	"	1.0582, 20°	Winkelman (2), 26, 10
" "	"	1.0465, 22°	Lüdeking. 27, 72.
" "	"	1.05704, 15°	Perkin. J. 777.
Propionic acid	$C_3H_6O_2$	1.0161, 0° }	Kopp. A. (307.
" "	"	.9911, 25°.2 }	
" "	"	.9963, 20°	Landolt. P. 353.
" "	"	.992, 18°	Linnemann. 433.
" "	"	.9961, 19°	Linnemann. 160, 195.
" "	"	1.0143, 0° }	Pierre and B. S. C. 1
" "	"	.9607, 49°.6 }	
" "	"	.9062, 99°.8 }	
" "	"	.9946, 20°	Brühl. Ber.
" "	"	1.0199, 0° }	Zander. A. C 181.
" "	"	.8657, 140°.7 }	
" "	"	1.0133, 0°	Zander. A 224, 88.
" "	"	.8589 } 140°.5	
" "	"	.8599 }	
" "	"	.9939, 20°	Winkelmann (2), 26, 10
" "	"	.9902, 25°	Lüdeking. P 27, 72.
" "	"	.9956, 20°	Traube. Ber.
" "	"	1.0089, 0° }	Renard. C. 158.
" "	"	.9904, 18° }	
" "	"	.99883, 15°	Perkin. J. (777.
Butyric acid. B. 163°	$C_4H_8O_2$	.9675, 25°	Chevreul.
" "	"	.963, 15°	Pelouze and P. A. 59,
" "	"	.98165, 0°	Pierre. C. R
" "	"	.9673, 15°	Mendelejeff.
" "	"	.9610, 20°	Landolt. P. 353.
" "	"	.9850, 13°.5	Bulk. A. C 62.
" "	"	.9580, 14°	Linnemann. P. 160, 1
" "	"	.9601, 14°	Linnemann (4), 27,
" "	"	.974, 15°	Graham. 123, 99.
" "	"	.9587, 20°	Brühl. A. 203, 1.
" "	"	.9594, 20°	Landolt. [illegible]
" "	"	.8141, 161°.5	Schiff. [illegible]

NAME.	FORMULA.	SP. GRAVITY	AUTHORITY.
acid	$C_4H_8O_2$	.9746, 0°	Zander. A. C. P. 224, 88.
“	“	.9781, 0°	
“	“	.8099, 162°.5	
“	“	.8120, 162°.5	
“	“	.9603, 20°	Winkelmann. P. A. (2), 26, 105.
“	“	.9549, 25°	Lüdeking. P. A. (2), 27, 72.
“	“	.9809, 0°	Gartenmeister. A. C. P. 233, 249.
“	“	.9624, 20°	Traube. Ber. 19, 885.
yric acid. B. 154°	“	.98862, 0°	Kopp. P. A. 72, 258.
“	“	.9739, 15°	
“	“	.973, 7°	Delffs. A. C. P. 92, 277.
“	“	.9598, 0°	Markownikoff. A. C. P. 138, 368.
“	“	.9208, 50°	
“	“	.8965, 100°	
“	“	.9503, 20°	Linnemann. Ann. (4), 27, 268.
“	“	.9697, 0°	Pierre and Puchot. B. S. C. 19, 72.
“	“	.9160, 52°.6	
“	“	.8665, 99°.8	
“	“	.8220, 139°.8	
“	“	.9490, 20°	Brühl. Ber. 13, 1529.
“	“	.9515, 20°	Brühl. A. C. P. 200, 180.
“	“	.8087, 153°	Schiff. G. C. I. 13, 177.
“	“	.9651, 0°	Zander. A. C. P. 224, 88.
“	“	.8054, 154°	
“	“	.9519, 20°	Traube. Ber. 19, 886.
l valeric acid.	$C_5H_{10}O_2$	.9577, 0°	Lieben and Rossi. A. C. P. 159, 58.
“ “ B. 185°	“	.9415, 20°	
“ “	“	.9284, 40°	
“ “	“	.9034, 99°.3	
“ “	“	.945, 17°.5	Cahours and Demarçay. C. R. 89, 331.
“ “	“	.7569, 195°	Ramsay. J. C. S. 35, 463.
“ “	“	.9608, 0°	Kehrer and Tollens. A. C. P. 206, 239.
“ “	“	.9448, 20°	
“ “	“	.9562, 0°	Zander. A. C. P. 224, 88.
“ “	“	.7828, 185°.4	
“ “	“	.9568, 0°	Gartenmeister. A. C. P. 233, 249.
ric acid.* B. 175°	“	.941, 14°	Chevreul.
“	“	.932, 28°	
“	“	.944, 10°	Trommsdorf. A. C. P. 6, 176.
“	“	.930, 12.°5	Trautwein. Gm. H.
“	“	.937, 16°.5	Dumas and Stas. J. P. C. 21, 267.
“	“	.9403, 15°	Personne. J. 7, 653.
“	“	.9555, 0°	Kopp. A. C. P. 95, 307.
“	“	.9378, 19°.6	

* Including ordinary and unspecified valerianic acid.

Name.	Formula.	Sp. Gravity.	Authors
Acetic acid	$C_2H_4O_2$	1.0559, 20°	Bedson an liams. Ber.
" "	"	1.0495, 20°	Brühl. Be
" "	"	1.0701, 0°	Zander. A.
" "	"	.9372, 118°.1	88.
" "	"	1.0532, 20°	Winkelman (2), 26, 1
" "	"	1.0465, 22°	Lüdeking. 27, 72.
" "	"	1.05704, 15°	Perkin. J. 777.
Propionic acid	$C_3H_6O_2$	1.0161, 0°	Kopp. A.
" "	"	.9911, 25°.2	307.
" "	"	.9963, 20°	Landolt. 1 353.
" "	"	.992, 18°	Linneman 433.
" "	"	.9961, 19°	Linneman 160, 195.
" "	"	1.0143, 0°	Pierre and
" "	"	.9607, 49°.6	B. S. C.
" "	"	.9062, 99°.8	
" "	"	.9946, 20°	Brühl. Ber.
" "	"	1.0199, 0°	Zander. A.
" "	"	.8657, 140°.7	181.
" "	"	1.0183, 0°	Zander.
" "	"	.8589 } 140°.5	224, 88
" "	"	.8599 } 140°.5	
" "	"	.9939, 20°	Winkelman (2), 26, 1
" "	"	.9902, 25°	Lüdeking. 27, 72.
" "	"	.9956, 20°	Traube. Be
" "	"	1.0089, 0°	Renard. (
" "	"	.9904, 18°	158.
" "	"	.99883, 15°	Perkin. J. 777.
Butyric acid. B. 163°	$C_4H_8O_2$	.9675, 25°	Chevreul.
" "	"	.963, 15°	Pelouze a P. A. 50,
" "	"	.98165, 0°	Pierre. C.
" "	"	.9673, 15°	Mendelejef
" "	"	.9610, 20°	Landolt. 1 353.
" "	"	.9850, 13°.5	Bulk. A. 62.
" "	"	.9580, 14°	Linneman P. 160, 1
" "	"	.9801, 14°	Linneman (4), 27,
" "	"	.974, 15°	Graham. 123,
" "	"	.9587, 20°	Brühl. 203,
" "	"	.9584, 20°	[illegible]
" "	"	[illegible], 161°.5	[illegible]

Name.	Formula.	Sp. Gravity	Authority.
[B]utyric acid	$C_4H_8O_2$	.9746 } 0°	Zander. A. C. P. 224, 88.
" "	"	.9781	
" "	"	.8099 } 162°.5	
" "	"	.8120	
" "	"	.9608, 20°	Winkelmann. P. A. (2), 26, 105.
" "	"	.9549, 25°	Lüdeking. P. A. (2), 27, 72.
" "	"	.9809, 0°	Gartenmeister. A. C. P. 233, 249.
" "	"	.9624, 20°	Traube. Ber. 19, 885.
Isobutyric acid. B. 154°	"	.98862, 0°	Kopp. P. A. 72, 258.
" "	"	.9739, 15°	
" "	"	.973, 7°	Delffs. A. C. P. 92, 277.
" "	"	.9598, 0°	Markownikoff. A. C. P. 138, 368.
" "	"	.9208, 50°	
" "	"	.8965, 100°	
" "	"	.9503, 20°	Linnemann. Ann. (4), 27, 268.
" "	"	.9697, 0°	Pierre and Puchot. B. S. C. 19, 72.
" "	"	.9160, 52°.6	
" "	"	.8665, 99°.8	
" "	"	.8220, 139°.8	
" "	"	.9490, 20°	Brühl. Ber. 18, 1529.
" "	"	.9515, 20°	Brühl. A. C. P. 200, 180.
" "	"	.8087, 153°	Schiff. G. C. I. 18, 177.
" "	"	.9651, 0°	Zander. A. C. P. 224, 88.
" "	"	.8054, 154°	
" "	"	.9519, 20°	Traube. Ber. 19, 886.
Normal valeric acid.	$C_5H_{10}O_2$	.9577, 0°	Lieben and Rossi. A. C. P. 159, 58.
" " " B. 185°	"	.9415, 20°	
" " "	"	.9284, 40°	
" " "	"	.9034, 99°.3	
" " "	"	.945, 17°.5	Cahours and Demarçay. C. R. 89, 331.
" " "	"	.7569, 195°	Ramsay. J. C. S. 35, 463.
" " "	"	.9608, 0°	Kehrer and Tollens. A. C. P. 206, 239.
" " "	"	.9448, 20°	
" " "	"	.9562, 0°	Zander. A. C. P. 224, 88.
" " "	"	.7828, 185°.4	
" " "	"	.9568, 0°	Gartenmeister. A. C. P. 233, 249.
Isovaleric acid.* B. 175°	"	.941, 14°	Chevreul.
" "	"	.932, 28°	
" "	"	.944, 10°	Trommsdorf. A. C. P. 6, 176.
" "	"	.930, 12°.5	Trautwein. Gm. H.
" "	"	.937, 16°.5	Dumas and Stas. J. P. C. 21, 267.
" "	"	.9403, 15°	Personne. J. 7, 653.
" "	"	.9555, 0°	Kopp. A. C. P. 95, 307.
" "	"	.9378, 19°.6	

* Including ordinary and unspecified valerianic acid.

NAME.	FORMULA.	SP. GRAVITY.	AUTHO[RITY]
Isovaleric acid	$C_5H_{10}O_2$	.935, 15°	Delffs. A. 277.
" "	"	.9558, 15°	Mendelejef
" "	"	.9318, 20°	Landolt. 353.
" "	"	.95357, 0°	Frankland pa. J.
" "	"	.9470, 0°	Pierre and B. S. C.
" "	"	.8972, 54°.65	
" "	"	.8542, 99°.9	
" "	"	.8095, 147°.5	
" "	"	.9465, 0°	From di sources meyer A. C. P
" "	"	.9285, 20°.2	
" "	"	.9468, 0°	
" "	"	.9295, 19°.7	
" "	"	.9462, 0°	
" "	"	.9299, 18°.8	
" "	"	.917, 15°	Ley. Be
" "	"	.93087, 17°.4	Schmidt a leben.
" "	"	.9345, 15°	Poetsch. 218, 56.
" "	"	.9297, 20°	Winkelma (2), 26, 1
" "	"	.941, 16°	Renard. 1, 223.
" "	"	.9318, 20°	Traube. B
Ethylmethylacetic acid, or active valeric acid. B. 172°.5	"	.9505, 0°	Erlenm Hell. 160, 25
" " "	"	.9331, 19°.5	
" " "	"	.938, 24°	Saur. A. 275.
" " "	"	.917, 15°	Ley. Be
" " "	"	.941, 21°	Pagenstech P. 195, 1
" " "	"	.948, 14°.5	Lescoeur. 31, 589.
" " "	"	.9405, 17°	Schmidt. 257.
Trimethylacetic acid	"	.944, 0°	Butlerow. 728.
" "	"	.905, 50°	
Normal caproic acid	$C_6H_{12}O_2$	.922, 26°	Chevreul.
" " B. 205°.	"	.931, 15°	Fehling. 53, 406.
" "	"	.9449, 0°	Lieben a A. C. P
" "	"	.9294, 20°	
" "	"	.9172, 40°	
" "	"	.8947, 99°.1	
" "	"	.9458, 0°	Lieben. A 89.
" "	"	.9288, 20°	
" "	"	.9144, 40°	
" "	"	[illegible]	Cahours a çay. C.
" "	"	.944, [illegible]	Zander. A 88.
" "	"	[illegible]	
		[illegible]	Gartenme P. 223,
	"	[illegible]	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
oic acid. B. 199°	$C_6H_{12}O_2$	.9252, 20°	Landolt. P. A. 117, 353.
"	"	.9237, 20°	Brühl. Bei. 4, 781.
acetic acid. B. 190°	"	.925, 27°	Sticht. J. 21, 522.
"	"	.945	Schnapp. Ber. 10, 1954.
"	"	.9355, 0°	Saytzeff. Ber. 11, 512.
"	"	.9196, 18	
propylacetic acid.	"	.9414, 0°	" "
" B. 193°	"	.9279, 18°	
" "	"	.9281, 25°	Liebermann and Scheibler. Ber. 16, 1823.
" "	"	.9286, 15°	Liebermann and Kleemann. Ber. 17, 918.
isopropylacetic acid	"	.928, 15°	Romburgh. J. C. S. 52, 282.
ethylpropionic acid	"	.930, 15°	Romburgh. J. C. S. 52, 228.
aic acid. B. 223°	$C_7H_{14}O_2$	.9167, 24°	Städeler. J. 10, 360.
"	"	.9179, 18°	Landolt. P. A. 117, 353.
"	"	.9175, 20°	
"	"	.9212, 24°	Franchimont. A. C. P. 165, 237.
"	"	.9345, 0°	Grimshaw and Schorlemmer. A. C. P. 170, 137.
"	"	.9278, 8°.5	
"	"	.9208, 16°	
"	"	.9110, 28°	
"	"	.9359, 0°	" "
"	"	.9348, 9°	
"	"	.9285, 28°	
"	"	.916, 21°	Mehlis. A. C. P. 185, 362.
"	"	.935, 0°	Lieben and Janecek. J. R. C. 5, 156.
"	"	.9198, 20°	
"	"	.9084, 40°	
"	"	.924, 21°	Cahours and Demarçay. C. R. 89, 331.
"	"	.9160, 20°	Brühl. Bei. 4, 781.
"	"	.9313, 0°	Zander. A. C. P. 224, 88.
"	"	.7429, 223°.2	
"	"	.9338, 0°	Gartenmeister. A. C. P. 233, 249.
ylic acid. B. 211°.5	"	.9305, 0°	Hecht. A. C. P. 209, 315.
"	"	.9138, 21°	
"	"	.8496, 100°	
lacetic acid. B. 217°	"	.9260, 15°	Poetsch. A. C. P. 218, 56.
ic acid. B. 236°.5	$C_8H_{16}O_2$	.911, 20°	Fehling. A. C. P. 53, 401.
"	"	.905, 21°	Perrot. J. 10, 353.
"	"	.901, 18°	Fischer. A. C. P. 118, 307.
"	"	.923, 17°	Cahours and Demarçay. C. R. 89, 331.
"	"	.9270, 0°	Zander. A. C. P. 224, 88.
"	"	.7264, 236°.5	

Name.	Formula.	Sp. Gravity.	Author
Caprylic acid	$C_8H_{16}O_2$	.9288, 0°	Gartenmeist P. 233, 24
Isoöctylic acid. B. 219°	"	.926, 0°	Williams. 85, 125.
" "	"	.911, 20°	
" "	"	.903, 30°	
" "	"	.893, 40°	
" "	"	.885, 50°	
" "	"	.846, 100°	
Dipropylacetic acid. B. 219°.5.	"	.9215, 0°	Burton. 3, 389.
Pelargonic acid. B. 253°	$C_9H_{18}O_2$	.903, 21°	Perrot. J.
" "	"	.9065, 17°	Franchimon Zincke. (57.
" "	"	.90656	From six sources. mann. Pharm. 2
" "	"	.90638	
" "	"	.90630	
" "	"	.90639	
" "	"	.90621	
" "	"	.90609	
" "	"	.9109, 12°.5	Krafft. Ber.
" "	"	.9068, 17°.5	
" "	"	.9433, 99°.3	
" "	"	.9082, 0°	Gartenmeist C. P. 233,
Isononylic acid. B. 245°	"	.90325, 18°	Kullhem. 173, 319.
Rutylic acid	$C_{10}H_{20}O_2$	.930, 37°, l.	Fischer. A. 118, 307.
Lauric acid	$C_{12}H_{24}O_2$	.883, 20°, s.	Görgey. A. 66, 306.
Stearic acid	$C_{18}H_{36}O_2$	1.01, 0°, s.	Saussure. Dict.
" "	"	.854, l.	
" "	"	a1.00, 9°	Kopp. J. 8
" "	"	.8521, 69°.5	Schiff. A. 223, 247.

4th. Anhydrides of the Fatty Acids.

Name.	Formula.	Sp. Gravity.	Author
Acetic anhydride	$C_4H_6O_3$	1.073, 20°.5	Gerhardt.
" "	"	1.0969, 0°	Kopp. A. (257.
" "	"	1.0799, 15°.2	
" "	"	1.075, 15°	Schiagdenh
" "	"	1.0793, 15°	Mendelejeff.
" "	"	1.0787, 20°	Nasini. B 1513.
" "	"	1.0816, 20°	Brühl. Bei
Propionic anhydride	$C_6H_{10}O_3$	1.01, 18°	Linnemann 432.
" "	"	1.0169, 15°	Perkin. J (2), 18, 1
Butyric anhydride	$C_8H_{14}O_3$	.978, 12°.5	Gerhardt.

Name.	Formula.	Sp. Gravity.	Authority.
...yric anhydride	$C_8 H_{14} O_3$	.9574, 16°.5	Toennies and Staub. Ber. 17, 851.
...c anhydride	$C_{10} H_{18} O_3$	.984, 15°	Watts' Dictionary.
...thic anhydride	$C_{14} H_{26} O_3$	.91, 14°	Malerba. J. 7, 444.
"	"	.932, 21°	Mehlis. A. C. P. 185, 371.

5th. Ethers of the Series $C_n H_{2n} O_2$.

Name.	Formula.	Sp. Gravity.	Authority.
...l formate	$C H_3 . C H O_2$	.9984, 0°	Kopp. P. A. 72, 261.
"	"	.9776, 15°.8	
"	"	.9766, 16°	
"	"	.9928, 0°	Volhard. A. C. P. 176, 185.
"	"	.9797, 15°	Kraemer and Grodzki. Ber. 9, 1928.
"	"	.9482, 33°	Ramsay. J. C. S. 35, 463.
"	"	.9767, 14°	De Heen. Bei. 5, 105.
"	"	.9566, 32°.3	Schiff. G. C. I. 13, 177.
"	"	.99839, 0°	Elsässer. A. C. P. 218, 302.
"	"	.95196, 32°.3	
...formate	$C_2 H_5 . C H O_2$	.9157, 18°	Gehler. See Böttger.
"	"	.912	Liebig. Quoted by Kopp.
"	"	.94474, 0°	Kopp. P. A. 72, 266.
"	"	.92546, 15°.7	
"	"	.9394, 0°	" "
"	"	.9188, 17°	
"	"	.93565, 0°	Pierre. C. R. 27, 213.
"	"	.917	Löwig. J. 14, 599.
"	"	.8649, 55°	Ramsay. J. C. S. 35, 463.
"	"	.9064, 20°	Brühl. Ber. 18, 1530.
"	"	.9214, 14°	De Heen. Bei. 5, 105.
"	"	.9367, 0°	Several intermediate values given. Naccari and Pagliani. Bei. 6, 89.
"	"	.9238, 10°.84	
"	"	.9122, 20°.03	
"	"	.8959, 32°.79	
"	"	.8865, 40°.02	
"	"	.8740, 49°.76	
"	"	.8707, 51°.94	
"	"	.8730 } 53°.4	Schiff. G. C. I. 13, 177.
"	"	.8731	
"	"	.93757, 0°	Elsässer. A. C. P. 218, 302.
"	"	.86667, 54°.4	
"	"	.9194 } 20°	Winkelmann. P. A. (2), 26, 105.
"	"	.9152	
"	"	.9445, 0°	Gartenmeister. A. C. P. 233, 249.

Name.	Formula.	Sp. Gravity.	Autho
Propyl formate	$C_3H_7.CHO_2$	.9197, 0°	Pierre and Z. C. 12,
" "	"	.877, 38°.5	
" "	"	.836, 72°.5	
" "	"	.9188, 0°	Pierre and Ann. (4),
" "	"	.8761, 38°.5	
" "	"	.835, 72°.5	
" "	"	.9026, 14°	De Heen. 105.
" "	"	.91838, 0°	Elsässer. A 218, 302.
" "	"	.82146, 81°	
" "	"	.9023 } 20°	Winkelman (2), 26, 1(
" "	"	.9125 } 20°	
" "	"	.9250, 0°	Gartenmeist P. 233, 24
" "	"	.8270, 81°	
Butyl formate	$C_4H_9.CHO_2$	.9108, 0°	"
" "	"	.7972, 106°.9	
Isobutyl formate	"	.8845, 0°	Pierre and Ann. (4),
" "	"	.850, 34°	
" "	"	.8224, 59°.8	
" "	"	.7962, 83°.4	
" "	"	.8650, 14°	De Heen. 105.
" "	"	.7784, 98°	Schiff. G. (177.
" "	"	.88543, 0°	Elsässer. A 218, 302.
" "	"	.78287, 97°.9	
Normal amyl formate	$C_5H_{11}.CHO_2$	.9018, 0°	Gartenmeist P. 233, 24
" " "	"	.7692, 130°.4	
Isoamyl formate	"	.884, 15°	Delffs. J. 7
" "	"	.8945, 0°	Kopp. A. (
" "	"	.8743, 21°	
" "	"	.8809, 15°	Mendelejeff.
" "	"	.8816, 14°	De Heen. Bei
" "	"	.7554, 123°.5	Schiff. G. (177.
" "	"	.8802, 20°	Brühl. Bei.
" "	"	.894378, 0°	Elsässer. A 218, 302
" "	"	.77027, 123°.3	
Normal hexyl formate	$C_6H_{13}.CHO_2$	.8495, 17°	Frentzel. B 745.
" " "	"	.8977, 0°	Gartenmeist P. 233, 24
" " "	"	.7484, 153°.6	
Normal heptyl formate	$C_7H_{15}.CHO_2$	.8937, 0°	"
" " "	"	.7308, 176°.7	
Normal octyl formate	$C_8H_{17}.CHO_2$	.8929, 0°	"
" " "	"	.7156, 198°.1	
Methyl acetate	$CH_3.C_2H_3O_2$	.919, 22°	Dumas and P. A. 36,
" "	"	.9328, 0°	Kopp. A. (
" "	"	.9085, 21°	
" "	"	.9562, 0°	Kopp. P. A.
" "	"	.93735, 15°.6	
" "	"	.86684, 0°	Pierre. C. R
" "	"	.940	Grodzki and mer. Z. A 108.
" "	"	.9039, 20°	Brühl. Ber.
" "	"	.9319, 14°	De Heen. Be

Name.	Formula.	Sp. Gravity.	Authority.
acetate	$CH_3 . C_2H_3O_2$	.8825, 55°	Schiff. G. C. I. 13, 177.
"	"	.8826, 55°	
"	"	.95774, 0°	Elsässer. A. C. P. 218, 302.
"	"	.88086, 57°.5	
"	"	.9424, 0°	Winkelmann. P. A. (2), 26, 105.
"	"	.9238, 19°.2	Henry. C. R. 101, 250.
"	"	.9643, 0°	Gartenmeister. Bei. 9, 766.
"	"	.8873, 57°.3	
acetate	$C_2H_5 . C_2H_3O_2$	.866, 7°	Thénard. Gm. H.
"	"	.89, 15°	Liebig.
"	"	.9051, 0°	Frankenheim. P. A. 72, 427.
"	"	.91046, 0°	Kopp. P. A. 72, 276.
"	"	.89277, 15°.7	
"	"	.8926, 15°.9	
"	"	.90691, 0°	Pierre. C. R. 27, 213.
"	"	.906, 17°.5	Marsson. J. 4, 514.
"	"	.903, 17°	Becker. J. 5, 563.
"	"	.932, 20°	Goessmann. J. 5, 563.
"	"	.9055, 17°.5	Marsson. J. 6, 501.
"	"	.8922, 15°	Delffs. J. 7, 26.
"	"	.8981, 15°	Mendelejeff. J. 13, 7.
"	"	.903, 0°	Pierre and Puchot. Ann. (4), 22, 261.
"	"	.868, 24°	Léblanc. Ann. (3), 10, 198.
"	"	.9068, 15°	Linnemann. A. C. P. 160, 195.
"	"	.9007, 20°	Brühl. Ber. 13, 1530.
"	"	.9026, 14°	DeHeen. Bei. 5, 105.
"	"	.8220, 74°.3	Schiff. Ber. 14, 2766.
"	"	.9227, 0°	Several intermediate values given. Naccari and Pagliani. Bei. 6, 89.
"	"	.9076, 12°.80	
"	"	.8914, 26°.24	
"	"	.8730, 41°.13	
"	"	.8594, 51°.75	
"	"	.8466, 61°.87	
"	"	.8309, 73°.74	
"	"	.9004	W. I. Clark. Ber. 16, 1227.
"	"	.9012	
"	"	.8306, 75°.5	Schiff. G. C. I. 13, 177.
"	"	.8294, 75°.5	
"	"	.92388, 0°	Elsässer. A. C. P. 218, 302.
"	"	.82673, 77°.1	
"	"	.9007, 20°	Winkelmann. P. A. (2), 26, 105.
"	"	.9047, 20°	
"	"	.9253, 0°	Gartenmeister. Bei. 9, 766.
acetate	$C_3H_7 . C_2H_3O_2$	.910, 0°	Pierre and Puchot. Z. C. 12, 660.
"	"	.8635, 42°.5	
"	"	.8137, 84°.6	
"	"	.910, 0°	Pierre and Puchot. Ann. (4), 22, 289.
"	"	.8627, 42°.5	
"	"	.8128, 84°.6	

Name.	Formula.	Sp. Gravity.	Author
Propyl acetate	$C_3H_7.C_2H_3O_2$	.913, 0°	Rossi. A. C 79.
" "	"	.8992, 15°	Linnemann P. 161, 2
" "	"	.8856, 20°	Brühl, Ber.
" "	"	.8871, 14°	De Heen. B
" "	"	.7916 } 101°.8	Schiff. G. 177.
" "	"	.7918 } 101°.8	
" "	"	.909092, 0°	Elsässer. 218, 302
" "	"	.794388, 100°.8	
" "	"	.9093, 0°	Gartenmeist P. 233, 2
Butyl acetate	$C_4H_9.C_2H_3O_2$	.9000, 0°	Lieben and A. C. P.
" "	"	.8817, 20°	
" "	"	.8659, 40°	
" "	"	.8768, 23°	Linnemann (4), 27, 2
" "	"	.9016, 0°	Gartenmeist P. 233, 2
" "	"	.7683, 124°.5	
Isobutyl acetate	"	.8845, 16°	Wurtz. J.
" "	"	.892, 0°	Lieben. J.
" "	"	.89096, 0°	Chapman an J. C. S. 2
" "	"	.8747, 16°	
" "	"	.88143, 50°	
" "	"	.9052, 0°	Pierre and Ann. (4),
" "	"	.8668, 37°.1	
" "	"	.8328, 68°.9	
" "	"	.8096, 89°.4	
" "	"	.7972, 99°.75	
" "	"	.7589, 112°.7	Schiff. G. 177.
" "	"	.892100, 0°	Elsässer. 218, 302
" "	"	.77080, 116°.3	
Normal amyl acetate	$C_5H_{11}.C_2H_3O_2$	.8963, 0°	Lieben and A. C. P.
" " "	"	.8792, 20°	
" " "	"	.8645, 40°	
" " "	"	.8948, 0°	Gartenmeist P. 233, 24
" " "	"	.7461, 147°.6	
Methylpropylcarbyl acetate.	"	.9222, 0°	Wurtz. Z. C
Diethylcarbyl acetate	"	.909, 0°	Wagneran eff. A. C 366.
" "	"	.893, 16°	
Amyl acetate	"	.8572, 21°	Kopp. A. 297.
" "	"	.8765, 0°	
" "	"	.8837, 0°	Kopp. A. 257.
" "	"	.8692, 15°.1	
" "	"	.863, 10°	Delffs. J.
" "	"	.8762, 15°	Mendelejeff.
" "	"	.8733 } 15°	Schorlemme 527.
" "	"	.8752 } 15°	
" " Inactive	"	.8838, 0°	Balbiano. 1437.
" "	"	.8561, 14°	De Heen. B
" "	"	.8561, 20°	Brühl. Be
" "	"	.7429 } 138°.5	Schiff. G. 177.
" "	"	.7430 } 138°.5	

[N]AME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
[...]nyl acetate	$C_5H_{11}.C_2H_3O_2$	.8909, 0°	Flawitzky. A. C. P. 179, 349.
" "	"	.8738, 19°	
[...]xyl acetate	$C_6H_{13}.C_2H_3O_2$	.8890, 17°	Franchimont and Zincke. C. N. 24, 263.
" "	"	.8902, 0°	Gartenmeister. A. C. P. 233, 249.
" "	"	.7267, 169°.2	
hexyl acetate	"	.8778, 0°	Wanklyn and Erlenmeyer. J. 16, 522.
" "	"	.8310, 50°	
[...]thylcarbyl ace-	"	.8824, 20°	Reformatsky. J. P. C. (2), 36, 340.
"	"	.8772, 25°	
"	"	.8735, 30°	
"	"	.8679, 35°	
[...]ylcarbyl ace-	"	.8525, 0°	Buff. J. 21, 336.
butylcarbylace-	"	.8805, 0°	Kuwschinow. Ber. 20, ref. 629.
[...]pylethol ace-	"	.8717, 25°	Lieben and Zeisel. M. C. 4, 33.
[...]ptyl acetate	$C_7H_{15}.C_2H_3O_2$	.874, 16°	Cross. J. C. S. 32, 123.
" "	"	.8891, 0°	Gartenmeister. A. C. P. 233, 249.
" "	"	.7134, 191.°3	
acetate	"	.8605, 16°	Three products. Schorlemmer. A. C. P. 136, 271.
"	"	.8707, 16°.5	
"	"	.8868, 19°	
[...]rbyl acetate	"	.8742, 0°	Ustinoff and Saytzeff. J. P. C. (2), 34, 470.
"	"	.8587, 20°	
[...]mylcarbylace-	"	.8595, 23°	Rohn. A. C. P. 190, 312.
[...]tyl acetate	$C_8H_{17}.C_2H_3O_2$	.8717, 16°	Zincke. J. 22, 370.
" "	"	.8847, 0°	Gartenmeister. A. C. P. 233, 249.
" "	"	.6981, 210°	
[...]ropylcarbylace-	"	.8738, 0°	Gortaloff and Saytzeff. J. P. C. (2), 33, 702.
" "	"	.8554, 20°	
acetate "	"	.822, 0°	Clermont. J. 17, 517.
"	"	.803, 26°	
[...]pylcarbyl ace-	$C_9H_{19}.C_2H_3O_2$	.8795, 0°	Tschebotareff and Saytzeff. J. P. C. (2), 33, 193.
" "	"	.8675, 20°	
[...]nyristic acetate	$C_{16}H_{32}O_2$	.8559, 15°	Perkin, Jr. J. C. S. 43, 77.
" "	"	.8476, 30°	
" "	"	.8448, 35°	
[...]ate	$C_{16}H_{33}.C_2H_3O_2$	.858, 20°	Dollfus. J. 17, 518.
[...]opionate	$CH_3.C_3H_5O_2$	.9578, 4°	Kahlbaum. Ber. 12, 344.
"	"	.8954, 14°	De Heen. Bei. 5, 105.
"	"	.8422 78°.5	Schiff. G. C. I. 13, 177.
"	"	.8423 78°.5	
"	"	.93725, 0°	Elsässer. A. C. P. 218, 302.
"	"	.836798, 79°.9	
"	"	.922, 15°	Israel. A. C. P. 231, 197.
	"	.9403, 0°	Gartenmeister. Bei. 9, 766.

Name.	Formula.	Sp. Gravity.	Auth
Ethyl propionate	$C_2H_5.C_3H_5O_2$	.9231, 0°	Kopp. .
" "	"	.8949, 26°.8	307.
" "	"	.9189, 0°	
" "	"	.8625, 45°.1	Pierre a
" "	"	.816, 83°	Ann. (
" "	"	.8964, 16°	Linnema
" "	"	.8945, 17°	160, 19
" "	"	.9175, 14°	De Heen.
" "	"	.7961 } 98°.8	Schiff.
" "	"	.7968	177.
" "	"	.9109, 0°	
" "	"	.8968, 12°.60	
" "	"	.8832, 24°.57	Several i
" "	"	.8637, 41°.54	values
" "	"	.8514, 52°.05	cari an
" "	"	.8365, 64°.46	Bei. 6,
" "	"	.8247, 74°.46	
" "	"	.8020, 92°.96	
" "	"	.91238, 0°	Elsässer.
" "	"	.79868, 98°.8	218, 30
" "	"	.91224, 0°	Weger. B
" "	"	.886 } 15°	Three sa
" "	"	.8910	rael. A
" "	"	.8900, 19°	197.
Propyl propionate	$C_3H_7.C_3H_5O_2$	.9022, 0°	
" "	"	.8498, 51°.27	Pierre a
" "	"	.7944, 100°.6	Ann.
" "	"	.7839, 108°.84	
" "	"	.8885, 13°	Linnema P. 161,
" "	"	.8821, 14°	De Heen.
" "	"	.7680 } 121°	Schiff. (
" "	"	.7683	177.
" "	"	.90192, 0°	Elsässer
" "	"	.772008, 122°.2	218, 3
" "	"	.9023, 0°	Gartenme C. P. 23
Butyl propionate	$C_4H_9.C_3H_5O_2$	.8828, 15°	Linnema (4), 27,
" "	"	.8953, 0°	Gartenme
" "	"	.7489, 145°.4	C. P. 2
Isobutyl propionate	"	.8926, 0°	
" "	"	.8437, 49°.2	Pierre a
" "	"	.7896, 100°.15	Ann. (
" "	"	.7698, 116°.5	
" "	"	.887595, 0°	Elsässer.
" "	"	.74424, 136°.8	218, 3
Amyl propionate	$C_5H_{11}.C_3H_5O_2$	.8700, 14°	De Heen.
" "	"	.7295, 160°	Schiff. 6 177.
" "	"	.887672, 0°	Elsässer
" "	"	.73846, 160°.2	218, 3
Normal heptyl propionate	$C_7H_{15}.C_3H_5O_2$	.884[illegible], 0°	Gartenme
" " "	"	.[illegible], 208°	C. P. 2
Normal octyl propionate	$C_8H_{17}.C_3H_5O_2$	.88[illegible], 0°	"
" " "	"	.[illegible], 225°.4	
Methyl butyrate	$CH_3.C_4H_7O_2$	.[illegible], 0°	K
" "	"	[illegible], 13°.5	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
butyrate	$C H_3 . C_4 H_7 O_2$	1.02928, 0°	Pierre. C. R. 27, 213.
"	"	.9091, 0°	Kopp. A. C. P. 95, 307.
"	"	.8793, 30°.3	
"	"	.9475, 4°	Kahlbaum. Ber. 12, 344.
"	"	.8962, 20°	Brühl. Ber. 13. 1530.
"	"	.91939, 0°	Elsässer. A. C. P. 218, 302.
"	"	.80261, 102°.3	
"	"	.9194, 0°	Gartenmeister. A. C. P. 233, 249.
l isobutyrate	"	.9056, 0°	Pierre and Puchot. B. S. C. 19, 72.
"	"	.8625, 38°.65	
"	"	.815, 78°.6	
"	"	.911181, 0°	Elsässer. A. C. P. 218, 302.
"	"	.80397, 92°.3	
utyrate	$C_2 H_5 . C_4 H_7 O_2$	.9003, 18°	Linnemann. A. C. P. 160, 195.
"	"	.8990, 17°	
"	"	.8892, 20°	Brühl. Ber. 14, 2800.
"	"	.7703 } 119°.8	Schiff. G. C. I. 13, 177.
"	"	.7705 }	
"	"	.90193, 0°	Pierre. C. R. 27, 213.
"	"	.8894, 15°	Mendelejeff. J. 13, 7.
"	"	.8942, 0°	Frankland and Duppa. J. 18, 306.
"	"	.89957, 0°	Elsässer. A. C. P. 218, 302.
"	"	.76940, 119°.9	
"	"	.9004, 0°	Gartenmeister. A. C. P. 233, 249.
sobutyrate	"	.90412, 0°	Kopp. P. A. 72, 287.
"	"	.89065, 13°	
"	"	.890, 0°	Pierre and Puchot. B. S. C. 19, 72.
"	"	.871, 18°.8	
"	"	.831, 55°.6	
"	"	.7794, 100°.1	
"	"	.7681, 110°.1	Schiff. G. C. I. 13, 177.
"	"	.890367, 0°	Elsässer. A. C. P. 218, 302.
"	"	.77725, 110°.1	
butyrate	$C_3 H_7 . C_4 H_7 O_2$	.8789, 15°	Linnemann. A. C. P. 161, 33.
"	"	.89299, 0°	Elsässer. A. C. P. 218, 302.
"	"	.745694, 142°.7	
l isobutyrate	"	.8872, 0°	Pierre and Puchot. Ann. (4), 22, 295.
"	"	.8402, 47°.24	
"	"	.7842, 100°.25	
"	"	.7525, 128°.75	
"	"	.884317, 0°	Elsässer. A. C. P. 218, 302.
"	"	.74647, 133°.9	
pyl butyrate	"	.8787, 0°	Silva. Z. C. 12, 508.
"	"	.8652, 13°	
butyrate	$C_4 H_9 . C_4 H_7 O_2$	.8885, 0°	Lieben and Rossi. A. C. P. 158, 137.
"	"	.8717, 20°	
"	"	.8579, 40°	
"	"	.8760, 12°	Linnemann. Ann. (4), 27, 268.
	"	.8878, 0°	Gartenmeister. A. C. P. 233, 249.
	"	.7264, 165°.7	

NAME.	FORMULA.	SP. GRAVITY.	AUT
Isobutyl butyrate	$C_4H_9.C_4H_7O_2$	.881778, 0°	Elsässe
" "	"	.71680, 156°.9	218,
" "	"	.8798, 0°	
" "	"	.86685, 16°	Grunzw
" "	"	.81838, 98°.4	18, 12
Isobutyl isobutyrate	"	.8719, 0°	
" "	"	.8238, 50°.8	Pierre a
" "	"	.7753, 99°.8	Ann. (
" "	"	.7439, 128°.3	
" "	"	.874957, 0°	Elsässe
" "	"	.73281, 146°.6	218,
" "	"	.87519, 0°	
" "	"	.86064, 15°	Grunzwe
" "	"	.81192, 98°.4	18, 125
Normal amyl butyrate	$C_5H_{11}.C_4H_7O_2$	.8832, 0°	Gartenm
" " "	"	.7092, 184°.8	P. 233,
Amyl butyrate	"	.8688, 15°	Mendelej
" "	"	.852, 15°	Delffs.
" "	"	.882306, 0°	Elsässer
" "	"	.71148, 178°.6	218,
" "	"	.878, 10°	De Heen.
Amyl isobutyrate	"	.8769, 0°	
" "	"	.8264, 55°.4	Pierre an
" "	"	.7839, 100°.2	Ann. (
" "	"	.7446, 189°.5	
" "	"	.875965, 0°	Elsässer.
" "	"	.70662, 168°.8	218,
Normal hexyl butyrate	$C_6H_{13}.C_4H_7O_2$	.8825, 0°	Gartenme
" " "	"	.6968, 205°.1	P. 233,
Normal heptyl butyrate	$C_7H_{15}.C_4H_7O_2$	.8827, 0°	"
" " "	"	.6869, 225°.2	
Normal octyl butyrate	$C_8H_{17}.C_4H_7O_2$	.8794, 0°	"
" " "	"	.6751, 242°.2	
Cetyl butyrate	$C_{16}H_{33}.C_4H_7O_2$	.856, 20°	Dollfus.
Methyl valerate	$CH_3.C_5H_9O_2$	.895, 17°	Cahours a çay. C.
" "	"	.9097, 0°	Gartenme
" "	"	.7767, 127°.8	9, 766.
Methyl isovalerate	"	.8960, 0°	Kopp. A
" "	"	.8806, 16°	
" "	"	.901525, 0°	
" "	"	.88687, 15°	Kopp. P.
" "	"	.88662, 15°.8	
" "	"	.9005, 0°	
" "	"	.8581, 41°.5	Pierre an
" "	"	.8343, 64°.3	Ann. (
" "	"	.7945, 100°.1	
" "	"	.8908, 16°	Renard. 1, 223.
" "	"	.885465, 17°	Schmidt a leben. 36, 1[illegible]
" "	"	.8795, 20°	Brühl.
" "	"	.90065, 0°	Elsässer.
" "	"	.77518, 116°.7	218,
Ethyl valerate	$C_2H_5.C_5H_9O_2$	.894, 0°	
" "	"	.8765, 20°	Liel
" "	"	.8616, 40°	

Name.	Formula.	Sp. Gravity.	Authority.
lerate	$C_2H_5 . C_5H_9O_2$	.878, 18°.5	Cahours and Demarçay. C. R. 89, 331.
"	"	.8939, 0°	Gartenmeister. Bei. 9, 766.
"	"	.7443, 144°.7	
ovalerate	"	.894, 13°	Otto. A. C. P. 25, 62.
"	"	.869, 14°	Berthelot. J. 7, 441.
"	"	.8829, 0°	Kopp. A. C. P. 96.
"	"	.8659, 18°	
"	"	.886, 0°	Pierre and Puchot. Ann. (4), 22, 353.
"	"	.832, 55°.7	
"	"	.7843, 99°.63	
"	"	.7582, 122°.5	
"	"	.8661, 20°	Brühl. Bei. 4, 782.
"	"	.88514, 0°	Elsässer. A. C. P. 218, 302.
"	"	.74764, 134°.3	
"	"	.8743, 16°	Renard. Ann. (6), 1, 223.
"	"	.8882, 0°	Frankland and Duppa. J. 20, 396.
"	"	.87166, 18°	
imethylacetate	"	.8773, 0°	Friedel and Silva. J. C. S. (2), 11, 1127.
"	"	.8535, 25°	
"	"	.875, 0°	Butlerow. B. S. C. 23, 27.
ethylethylacetate	"	.877, 15°	Israel. A. C. P. 231, 197.
valerate	$C_3H_7 . C_5H_9O_2$	.8888, 0°	Gartenmeister. Bei. 9, 766.
"	"	.7264, 167.°5	
isovalerate	"	.8862, 0°	Pierre and Puchot. Ann. (4), 22, 297.
"	"	.8387, 50°.8	
"	"	.7906, 100°.15	
"	"	.7755, 113°.7	
"	"	.880915, 0°	Elsässer. A. C. P. 218, 302.
"	"	.727405, 155°.9	
yl isovalerate	"	.8702, 0°	Silva. Z. C. 12, 508.
"	"	.8538, 17°	
alerate	$C_4H_9 . C_5H_9O_2$	.8847, 0°	Gartenmeister. Bei. 9, 766.
"	"	.7095, 185°.8	
l isovalerate	"	.8884, 0°	Pierre and Puchot. Ann. (4), 22, 330.
"	"	.8438, 49°.7	
"	"	.7966, 100°	
"	"	.7428, 155°.8	
"	"	.873599, 0°	Elsässer. A. C. P. 218, 302.
"	"	.70549, 168°.7	
l amyl valerate	$C_5H_{11} . C_5H_9O_2$	.8812, 0°	Gartenmeister. Bei. 9, 766.
" "	"	.6982, 203°.7	
isovalerate	"	.8793, 0°	Kopp. A. C. P. 94, 257.
"	"	.8645, 17°.7	
"	"	.8596, 15°	Mendelejeff. J. 13, 7.
"	"	.874, 0°	Pierre and Puchot. Ann. (4), 22, 346.
"	"	.832, 50°.67	
"	"	.787, 100°	
"	"	.740, 149°.5	
" Inactive	"	.8700, 0°	Balbiano. Ber. 9, 1437.
"	"	.8633, 16°	Renard. Ann. (6), 1, 223.
[illegible]	"	.869, 15°	Ley. Ber. 6, 1362.

Name.	Formula.	Sp. Gravity.	Auth
Amyl isovalerate	$C_5H_{11}.C_5H_9O_2$	.8658, 20°	Brühl.
" "	"	.863, 10°	De Heer 818.
Normal hexyl valerate	$C_6H_{13}.C_5H_9O_2$	.8797, 0°	Gartenm 9, 766.
" " "	"	.6823, 223°.8	
Normal heptyl valerate	$C_7H_{15}.C_5H_9O_2$	.8786, 0°	"
" " "	"	.6708, 243°.6	
Normal octyl valerate	$C_8H_{17}.C_5H_9O_2$	.8784, 0°	"
" " "	"	.6618, 260°.2	
Octyl isovalerate	"	.8624, 16°	Zincke.
Cetyl isovalerate	$C_{16}H_{33}.C_5H_9O_2$	.852, 20°	Dollfus.
Methyl caproate	$CH_3.C_6H_{11}O_2$	.8977, 18°	Fehling. 53, 399
" "	"	.889, 19°	Cahours çay. C.
" "	"	.9039, 0°	Gartenm 9, 766.
" "	"	.7536, 149°.6	
Ethyl caproate	$C_2H_5.C_6H_{11}O_2$	.882, 18°	Lerch. A 212.
" "	"	.8765, 17°.5	Franchin Zincke. 163, 19
" "	"	.8898, 0°	Lieben a A. C. F
" "	"	.8732, 20°	
" "	"	.8594, 40°	
" "	"	.8898, 0°	Lieben. 170, 89.
" "	"	.8728, 20°	
" "	"	.8596, 40°	
" "	"	.878, 19°	Cahours a çay. C.
" "	"	.8888, 0°	Gartenme 9, 766.
" "	"	.7269, 166°.6	
Ethyl isocaproate	"	.887, 0°	Lieben a A. C. I
" "	"	.8705, 20°	
" "	"	.8566, 40°	
Ethyl diethylacetate	"	.8822, 0°	Franklan pa. J.
" "	"	.8826, 0°	Saytzeff. 512.
" "	"	.8686, 18°	
Ethyl methylpropylacetate	"	.8816, 0°	"
" "	"	.8670, 18°	
" "	"	.8841, 0°	Lieben a M. C. 4
Propyl caproate	$C_3H_7.C_6H_{11}O_2$	.8844, 0°	Gartenme 9, 766.
" "	"	.7097, 185°.5	
Butyl caproate	$C_4H_9.C_6H_{11}O_2$	.8824, 0°	"
" "	"	.6978, 204°.3	
Hexyl caproate	$C_6H_{13}.C_6H_{11}O_2$	.865	Franchin Zincke. 263.
Methylethylpropyl methylethylpropionate.	"	.867, 15°	Romburg 52, [illegible]
Normal heptyl caproate	$C_7H_{15}.C_6H_{11}O_2$	.8769, 0°	Gartenm 9, 766.
" " "	"	.6594, 259°.4	
Normal octyl caproate	$C_8H_{17}.C_6H_{11}O_2$	.8748, 0°	"
" " "	"	.6509, 275°.2	
Methyl oenanthate	$CH_3.C_7H_{13}O_2$	.889, 19°	Ca

Name.	Formula.	Sp. Gravity.	Authority.
enanthate	$C H_3 . C_7 H_{13} O_2$	.8981, 0°	Gartenmeister. Bei. 9, 766.
"	"	.7325, 172.°1	
soöenanthate	"	.8840, 15°	Poetsch. A. C. P. 218, 56.
"	"	.8790, 15°	Hecht. A. C. P. 209, 324.
nanthate	$C_2 H_5 . C_7 H_{13} O_2$	.874, 24°	Franchimont. A. C. P. 165, 237.
"	"	.8735, 16°	Grimshaw and Schorlemmer. A. C. P. 170, 137.
"	"	.871, 21°	Mehlis. A. C. P. 185, 366.
"	"	.877, 16°.5	Cahours and Demarçay. C. R. 89, 331.
"	"	.8879, 0°	Lieben and Janecek. J. R. C. 5, 156.
"	"	.8716, 20°	
"	"	.8589, 40°	
"	"	.87163, 15°	Perkin. J. P. C. (2), 32, 523.
"	"	.87199, 15°	
"	"	.86477, 25°	
"	"	.86487, 25°	
"	"	.8861, 0°	Gartenmeister. Bei. 9, 766.
"	"	.7105, 187°.1	
isoöenanthate	"	.8720, 15°	Poetsch. A. C. P. 218, 56.
"	"	.8685, 15°	Hecht. A. C. P. 209, 324.
"	"	.8570, 27°	
l oenanthate	$C_3 H_7 . C_7 H_{13} O_2$	.8824, 0°	Gartenmeister. Bei. 9, 766.
"	"	.6965, 206°.4	
l isoöenanthate	"	.8635, 19°	Hecht. A. C. P. 209, 324.
opyl isoöenanthate	"	.859, 19°	Hecht. A. C. P. 209, 325.
l oenanthate	$C_4 H_9 . C_7 H_{13} O_2$	.8807, 0°	Gartenmeister. Bei. 9, 766.
"	"	.6839, 225°.1	
al heptyl oenanthate	$C_7 H_{15} . C_7 H_{13} O_2$	.870, 16°	Cross. J. C. S. 32, 123.
" "	"	.86522, 15°	Perkin. J. P. C. (2), 32, 523.
" "	"	.85933, 25°	
" "	"	.8807, 0°	Gartenmeister. Bei. 9, 766.
" "	"	.6839, 225°.1	
al octyl oenanthate	$C_8 H_{17} . C_7 H_{13} O_2$	.8757, 0°	" "
" "	"	.6419, 290°.4	
yl caprylate	$C H_3 . C_8 H_{15} O_2$	.882	Fehling. A. C. P. 53, 399.
"	"	.887, 18°	Cahours and Demarçay. C. R. 89, 331.
"	"	.8942, 0°	Gartenmeister. Bei. 9, 776.
"	"	.7163, 192°.9	
l caprylate	$C_2 H_5 . C_8 H_{15} O_2$	.8738, 15°	Fehling. A. C. P. 53, 399.
"	"	.8728, 16°	Zincke. J. 22, 373.
"	"	.878, 17°	Cahours and Demarçay. C. R. 89, 331.
"	"	.8842, 0°	Gartenmeister. Bei. 9, 766.
	"	.6980, 205°.8	

NAME.	FORMULA.	SP. GRAVITY.	AUTHOR
Propyl caprylate	$C_3 H_7 . C_8 H_{15} O_2$	.8805, 0°	Gartenmeist 9, 766.
" "	"	.6867, 224°.7	
Butyl caprylate	$C_4 H_9 . C_8 H_{15} O_2$	.8797, 0°	"
" "	"	.6745, 240°.5	
Normal heptyl caprylate	$C_7 H_{15} . C_8 H_{15} O_2$	.8754, 0°	"
" " "	"	.6405, 289°.8	
Normal octyl caprylate	$C_8 H_{17} . C_8 H_{15} O_2$	.8625, 16°	Zincke. J.
" " "	"	.8755, 0°	Gartenmeist 9, 766.
" " "	"	.6318, 305°.9	
Methyl pelargonate	$C H_3 . C_9 H_{17} O_2$	.8765, 17°.5	Zincke and F mont. A.C 333.
Ethyl pelargonate	$C_2 H_5 . C_9 H_{17} O_2$	.86	Cahours. J.
" "	"	.8725, 15°.5	Delffs. J. 7
" "	"	.8655, 17°.5	Zincke and F mont. A.C 333.
" "	"	.86307	With acid fi sources. mann. Pharm. 22
" "	"	.86281	
" "	"	.86503	
" "	"	.86402	
" "	"	.86376	
" "	"	.86209	
" "	"	.87033, 15°	Perkin. J. (2), 32, 52
" "	"	.86407, 25°	
Ethyl isononylate	"	.86406, 17°	Kullhem. A 173, 319.
Ethyl rutylate	$C_2 H_5 . C_{10} H_{19} O_2$	.862	Rowney. J.
Ethyl laurate	$C_2 H_5 . C_{12} H_{23} O_2$	.86, 20°	Görgey. J.
" "	"	.8671, 19°	Delffs. J. 7
Ethyl myristate	$C_2 H_5 . C_{14} H_{27} O_2$	.864	Playfair. A.(153.

6th. Aldehydes of the Acetic Series.

NAME.	FORMULA.	SP. GRAVITY.	AUTHOR
Acetic aldehyde. B. 20°.8	$C_2 H_4 O$	.7900, 18°	Liebig. A. (132.
" "	"	.79442, 5°.1	Kopp. P. 235.
" "	"	.79388, 5°.6	
" "	"	.80092, 0°	
" "	"	.80551, 0°	Pierre. C. 213.
" "	"	.796, 15°	Guckelberg 848.
" "	"	.8217, 5°—10°	Regnault. 62, 50.
" "	"	.8173, 10°—15°	
" "	"	.8130, 15°—20°	
" "	"	.7771, 21°	Ramsay. J 85, 463.
" "	"	.807, 0°	Wurtz.
" "	"	.7832, 10°	Landol
" "	"	.7799, 20°	Brühl

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
ıldehyde	$C_2 H_4 O$	.79509, 10°	Perkin. J. P. C. (2), 32, 523.
"	"	.79138, 13°	
"	"	.78761, 16°	
"	"	.81812, —5°	Perkin. J. C. S. 51, 808.
"	"	.80561, 0°	
"	"	.80058, 4°	
"	"	.79520, 8°	
"	"	.78826, 18°	
ehyde. B. 124°	$(C_2 H_4 O)_3$	.998, 15°	Kekulé and Zincke. Z. C. 13, 560.
"	"	.9943 } 20°	Two lots. Brühl. A. C. P. 203, 1.
"	"	.9971 } 20°	
"	"	.8737 } 124°.3	Schiff. G. C. I. 13, 177.
"	"	.8739 } 124°.3	
"	"	.9909, 19°	Gladstone. Bei. 9, 249.
"	"	.9982	Louguinine. Ber. 19, ref. 2.
"	"	.99925, 15°	Perkin. J. P. C. (2), 32, 523.
"	"	.99003, 25°	
›faldehyde. B. 110°	$(C_2 H_4 O)_n$	1.033, 0°	Bauer. J. 13, 436.
ıic aldehyde. B. 49°.5.	$C_3 H_6 O$	.790, 15°	Guckelberger. J. 1, 848.
"	"	.8284, 0°	Michaelson. J. 17, 336.
"	"	.804, 17°	Rossi. A. C. P. 159, 79.
"	"	.832, 0°	Pierre and Puchot. Ann. (4), 22, 298.
"	"	.8192, 9°.7	
"	"	.7898, 32°.6	
"	"	.8074, 21°	Linnemann. A.C.P. 161, 23.
"	"	.8066, 20°	Brühl. Ber. 13, 1527.
"	"	.80648, 15°	Perkin. J. P. C. (2), 32, 523.
"	"	.79664, 25°	
: aldehyde. B. 75°	$C_4 H_8 O$	.821, 22°	Chancel. C. R. 19, 1440.
"	"	.8341, 0°	Michaelson. J. 17, 336.
"	"	.8170, 20°	Brühl. A. C. P. 203, 1.
"	"	.80, 15°	Guckelberger. J. 1, 849.
ric aldehyde. B. 63°	"	.8226, 0°	Pierre and Puchot. Z. C. 13, 255.
"	"	.7919, 27°.75	
"	"	.7638, 50°.4	
"	"	.7950, 20°	Urech. Ber. 12, 1744.
"	"	.808, 20°	Linnemann. Ann. (4), 27, 268.
"	"	.7938, 20°	Brühl. A.C.P. 203, 1.
"	"	.8057, 0°	Fossek. M. C. 4, 662.
"	"	.7898, 20°	
"	"	.79722, 15°	Perkin. J. P. C. (2), 32, 523.
"	"	.78787, 26°	
r of isobutyric aldehyde.	$(C_4 H_8 O)_n$	.969, 24°	Urech. Ber. 12, 1744.
hyde. B. 92°.5.	$C_5 H_{10} O$	.818	Trautwein.

NAME.	FORMULA.	SP. GRAVITY.	AUTHO
Isovaleric aldehyde	$C_5 H_{10} O$	.820, 22°	Chancel. J. 447.
" "	"	.8009, 20°	Personne.
" "	"	.8224, 0°	Kopp. A. 257.
" "	"	.8057, 17°.4	
" "	"	.8209, 0°	Pierre and Ann. (4),
" "	"	.778, 43°.4	
" "	"	.7485, 71°.9	
" "	"	.768, 12°.5	A. Schröde 14, 510.
" "	"	.7984, 20°	Brühl. Be
" "	"	.8061, 25°	Gladstone. 249.
" "	"	.7998, 20°	Landolt. I 556.
" "	"	.80405, 15°	Perkin. J (2), 32, 5
" "	"	.79607, 25°	
Polymer of valeral. B. 215°	$(C_5 H_{10} O)_n$	.90	Wanklyn.
Isomer of capraldehyde. B. 180°—185°.	$C_6 H_{12} O$	.842, 15°	Fittig. J.
Oenanthic aldehyde, or oenanthol. B. 154°.	$C_7 H_{14} O$	.8271, 7°	Bussy. J. 92.
" "	"	.827, 17°	Williamson 565.
" "	"	.828, 16°	Cross. J. 128.
" "	"	.8495, 20°	Brühl. A 203, 1.
" "	"	.8281, 15°	Perkin, Jr. 2802.
" "	"	.8128, 30°	
" "	"	.8099, 35°	
" "	"	.82264, 15°	Perkin. J (2), 32, 5
" "	"	.81578, 25°	
Isomer of oenanthol. B. 161°—164°.	"	.835, 14°	Fittig. J.
Caprylic aldehyde. B. 178°	$C_8 H_{16} O$	.818, 19°	Bouis. J.
" "	"	.820	Limpricht. 93, 242.
Euodyl aldehyde. B. 213	$C_{11} H_{22} O$	.8497, 15°	Williams. J
Isomer of myristic aldehyde. " "	$C_{14} H_{28} O$	.8274, 30°	Perkin, Jr. 43, 71.
	"	.8258, 35°	
Derivative of the foregoing compound. "	$C_{21} H_{40} O$	.8744, 15°	Perkin, Jr. 43, 72.
"	"	.8665, 30°	
" " "	"	.8637, 35°	

7th. Ketones of the Paraffin Series.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Dimethyl ketone, or acetone. B. 56°.5.	$CH_3.CO.CH_3$	.7921, 18°	Liebig. Gm. H.
" " "	"	.8144, 0°	Kopp. P. A. 72, 239.
" " "	"	.79945, 18°.9	
" " "	"	.790, 15°	Linnemann. A. C. P. 143, 349.
" " "	"	.8008, 15°	Mendelejeff. J. 13,7.
" " "	"	.7938, 18°	Linnemann. A. C. P. 161, 18.
" " "	"	.7975, 15°	
" " "	"	.7998, 15°	Grodzki and Krämer. Z. A. C. 14, 103.
" " "	"	.81858, 0°	Thorpe. J. C. S. 37, 371.
" " "	"	.75369, 56°.53	
" " "	"	.7920, 20°	Brühl. Ber. 13, 1527.
" " "	"	.8125, 0°	Zander. A. C. P. 214, 181.
" " "	"	.7489, 56°.3	
" " "	"	.7506, 56°	Schiff. G. C. I. 13, 177.
" " "	"	.79652, 15°	Perkin. J. P. C. (2), 32, 523.
" " "	"	.78669, 25°	
Methyl ethyl ketone, or methyl acetone. B. 78°.	$CH_3.CO.C_2H_5$	.838, 19°	Fittig. J. 12, 341.
" " "	"	.8125, 13°	Frankland and Duppa. J. 18, 309.
" " "	"	.824, 0°	Popoff. J. 20, 399.
" " "	"	.8068, 15°.3	Grimm. Z. C. 14, 174.
" " "	"	.8045, 19°.8	Schramm. Ber. 16, 1581.
Diethyl ketone, or propione. B. 104°.	$C_2H_5.CO.C_2H_5$	.811, 11°.5	Genther. J. 20, 455.
" " "	"	.8145, 0°	Chapman and Smith. J. 20, 453.
" " "	"	.8015, 15°	
" " "	"	.813, 20°	Smith. B. S. C. 18, 321.
" " "	"	.829, 0°	Wagner and Saytzeff. A. C. P. 179, 323.
" " "	"	.811, 19°	
" " "	"	.8335, 0°	Chancel. C. R. 99, 1055.
Methyl propyl ketone. B. 103°.	$CH_3.CO.C_3H_7$	.8078, 18°.5	Grimm. Z. C. 14, 174.
" " "	"	.827, 0°	Friedel. J. 11, 295.
" " "	"	.842, 19°	Fittig. J. 12, 341.
" " "	"	.8132, 18°	Frankland and Duppa. J. 18, 307.
" " "	"	.8040, 22°	
" " "	"	.815, 17°.5	Popoff. A. C. P. 161, 285.
" " "	"	.828, 0°	Wagner and Saytzeff. A. C. P. 179, 323.
" " "	"	.810, 19°	
" " "	"	.8264, 0°	Chancel. C. R. 99, 1055.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORI
Methyl propyl ketone	$CH_3.CO.C_3H_7$	.81238 } 15°	Perkin. J. (2), 32, 52
" " "	"	.81233	
" " "	"	.80447 } 25°	
" " "	"	.80423	
Methyl isopropyl ketone. B. 95°.	"	.8099, 18°	Frankland a[nd] pa. J. 18,
" " "	"	.815, 15°	Münch. A. 180, 337.
" " "	"	.822, 0° }	Wischnegrad C. P. 190,
" " "	"	.804, 19°	
" " "	"	.8123, 0° }	Winogradow P. 191, 12
" " "	"	.8051, 19°	
Ketone from amylene bromide. B. 76°—81°.	$C_5H_{10}O$	.832, 0°	Bouchardat. 14, 2261.
Ethyl propyl ketone. B. 123°.	$C_2H_5.CO.C_3H_7$	.818, 17°.5	Popoff. A.C 285.
" " "	"	.833, 21°.8	Oechsner ninck. C.R
Methyl butyl ketone.	$CH_3.CO.C_4H_9$	.8298, 0° }	Wanklyn an meyer. J.
" " " B. 128°	"	.7846, 50°	
" " "	"	.833, 0°	Friedel. J.
Methyl isobutyl ketone. B. 114°.	"	.81892, 0°	Frankland Duppa. J.
Methyl secondary butyl ketone. B. 118°.	"	.811, 0°	G. Wagner. ref. 180.
" " "	"	.8181, 14°.5	Wislicenus. 219, 308.
Methyl tertiary butyl ketone, or pinacolin. B. 106°.	$CH_3.CO.C(CH_3)_3$	.7999, 16°	Fittig. J. 1
" " " "	"	.830, 0° }	Two prepa Butlerow P. 174, 1
" " " "	"	.791, 50°	
" " " "	"	.823, 0° }	
" " " "	"	.787, 50°	
" " " "	"	.7217, 105°	Schiff. Bei.
Ketone from hexylene. B. 125°.	$C_6H_{12}O$	.8343, 11°	L. Henry. C 260.
Dipropyl ketone, or butyrone. B. 144°.	$C_3H_7.CO.C_3H_7$	.830	Chancel. A 12, 146.
" " "	"	.819, 20°	E. Schmidt. 597.
" " "	"	.82, 20°	Kurtz. A.C 207.
" " "	"	.83048, 4° }	Perkin. J. C 323.
" " "	"	.82165, 15°	
" " "	"	.81452, 25°	
Diisopropyl ketone. B. 125°.	"	.8254, 17°	Münch. A.C 331.
Methyl amyl ketone. B. 155°—156°.	$CH_3.CO.C_5H_{11}$	.813, 20°	E. Schmidt. 597.
" " " B. 182°.5	" ?	.898, 12°	Geuther. J. 6, 160.
Methyl isoamyl ketone.	"	.828 }	Popoff. J.
" " " B. 144	"	.829	
" " "	"	.8747, 17°	Grimshaw. 166, 163.
" " "	"	.8175, 17°.2	Rohn. A.C

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Methylisopropyl acetone	$CH_3.CO.C_5H_{11}$	.815, 20°	Romburgh. J. C. S. 52, 232.
Methyldiethylcarbyl ketone, or diethyl acetone. B. 138°.	"	.8171, 22°	Frankland and Duppa. J. 18, 306.
Methyl amyl pinacolin.	"	.842, 0°	Wischnegradsky. A. C. P. 178, 103.
" " B. 132°	"	.825, 21°	
Ethyl butyl pinacolin.	$C_2H_5.CO.C(CH_3)_3$	.831, 0°	" "
" " " B. 126°	"	.810, 21°	
Methyl hexyl ketone.	$CH_3.CO.C_6H_{13}$	.817, 23°	Städeler. J. 10, 361.
" " B. 171°	"	.8185, 20°	Brühl. A. C. P. 203, 1.
" " "	"	.6843 } 172°.3	Schiff. G. C. I. 13, 177.
" " "	"	.6844 } 172°.3	
" " B. 209°	"	.8430, 15°	Poetsch. A.C.P.218, 56.
" " "	"	.8351, 0°	Béhal. B. S. C. 47, 34.
Methyl butyrone. B. 180°	$C_8H_{16}O$	.827, 16°	Limpricht. J. 11, 296.
Isopropyl isobutyl ketone. B. 160°.	$C_3H_7.CO.C_4H_9$	.865, 14°	Williams. C. N. 39, 41.
Ethyl amyl pinacolin.	$C_2H_5.CO.C_5H_{11}$	.845, 0°	Wischnegradsky. A. C. P. 178, 103.
" " " B. 151°	"	.829, 21°	
Diisobutyl ketone, or valerone. B. 181°.	$C_4H_9.CO.C_4H_9$	.833, 20°	E. Schmidt. Ber. 5, 597.
Methyl octyl ketone. B. 211°.	$CH_3.CO.C_8H_{17}$	.8294, 17°.7	Jourdan. Ber. 13, 434.
" " "	"	.8379, 3°.5	Krafft. Ber. 15, 1687.
" " "	"	.8247, 20°	
Diamyl ketone, or caprone. B. 220°.	$C_5H_{11}.CO.C_5H_{11}$	.822, 20°	E. Schmidt. Ber. 5, 597.
" " "	"	.828, 20°	Limpricht. J. 11, 296.
Methyl nonyl ketone, or methyl caprinol. B. 224°.	$CH_3.CO.C_9H_{19}$	.8295, 17°.5	Gorup-Besanez and Grimm. Z. C. 13, 290.
	"	.8281, 18°.7	
" " "	"	.8268, 20°.5	Giesecke. Z. C. 13, 428.
Dihexyl ketone, or oenanthone. B. 264°.	$C_6H_{13}.CO.C_6H_{13}$	.825, 30°	v. Uslar and Seekamp. J. 11, 299.
" " ?	"	.8870, 15°	Poetsch. A. C. P. 218, 56.
Methyl diheptylcarbyl ketone. B. 302°.	$CH_3.CO.C_{15}H_{31}$	.826, 17°	Jourdan. Ber. 13, 434.
Laurone. M. 69°	$C_{11}H_{23}.CO.C_{11}H_{23}$	.8036, 69°	Krafft. Ber. 15, 1711.
"	"	.8024, 70°.7	
"	"	.7888, 90°.9	
Myristone. M. 76°.3	$C_{13}H_{27}.CO.C_{13}H_{27}$	.8013, 76°.3	" "
"	"	.7986, 80°.8	
"	"	.7922, 90°.9	
Palmitone. M. 82°.8	$C_{15}H_{31}.CO.C_{15}H_{31}$	.7997, 82°.8	" "
"	"	.7947, 90°.9	
Stearone. M. 88°.4	$C_{17}H_{35}.CO.C_{17}H_{35}$	.7979, 88°.4	" "
"	"	.7932, 95°	

8th. Oxides, Alcohols, and Ethers of the Olefines.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Ethylene oxide	$C_2H_4.O$	.8945, 0°	Wurtz. J. 16, 486.
Propylene oxide	$C_3H_6.O$	.859, 0°	Oser. J. 13, 448.
Butylene oxide. B. 56°.5.	$C_4H_8.O$	.8344, 0°	Eltekow. J. C. S. 44, 566.
Isobutylene oxide. B. 51°.5.	"	.8311, 0°	Eltekow. Ber. 16, 397.
Amylene oxide. B. 95°	$C_5H_{10}.O$	.824, 0°	Bauer. J. 13, 451.
Trimethylethylene oxide. B. 75°.5.	"	.8293, 0°	Eltekow. Ber. 16, 397.
Methylpropylethylene oxide. B. 110°.	$C_6H_{12}.O$	.8236, 13°.8	L. Henry. Ann. (5), 29, 553.
δ. Hexylene oxide. B. 103°—104°.	"	.8739, 0°	Lipp. Ber. 18, 3284.
Octylene oxide. B. 145°	$C_8H_{16}.O$	.831, 15°	De Clermont. Z. C. 13, 411.
Diamylene oxide. B. 185°.	$C_{10}H_{20}.O$	.9402, 0°	Schneider. A. C. P. 157, 221.
Diethylene dioxide. B. 102°.	$C_4H_8O_2$	1.0482, 0°	Wurtz. J. 15, 423.
Ethylene ethylidene dioxide. B. 82°.5.	"	1.0002, 0°	Wurtz. J. 14, 656.
Ethylene glycol. B. 197°	$C_2H_4.(OH)_2$	1.125, 0°	Wurtz. Ann. (3), 55, 410.
" "	"	.9444, 195°	Ramsay. J. C. S. 35, 463.
" "	"	1.11678, 15°	Perkin. J. P. C. (2), 32, 523.
" "	"	1.11208, 25°	
" "	"	1.1072, 20°	Brühl. Bei. 4, 782.
Trimethylene glycol. B. 216°.	$C_3H_6.(OH)_2$	1.053, 19°	Reboul. C. R. 79, 169.
" "	"	1.0536, 18°	Freund. J. C. S. 42, 156.
" "	"	1.0625, 0°	Zander. A. C. P. 214, 181.
" "	"	.9028, 214°	
Propylene glycol. B. 188°	"	1.051, 0°	Wurtz. J. 10, 464.
" "	"	1.038, 23°	
" "	"	1.054, 0°	Belohoubek. Ber. 12, 1873.
" "	"	1.047, 19°	Loebisch and Looss. J. C. S. 42, 877.
" "	"	1.0527, 0°	Zander. A. C. P. 214, 181.
" "	"	.8899, 188°.5	
Butylene glycol. B. 183°.5	$C_4H_8.(OH)_2$	1.048, 0°	Wurtz. J. 12, 499.
Dimethylethyleneglycol. B. 207°.5.	"	1.0259, 0°	Wurtz. C. R. 97, 473.
Ethylethylene glycol.	"	1.0189, 0°	Grabowsky and Saytzeff. A. C. P. 179, 333.
" " B. 191°.5	"	1.0059, 17°.5	
Isobutylene glycol. B. 177°	"	1.0129, 0°	Nevolé. C. R. 83, 67.
" "	"	1.0003, 20°	

Name.	Formula.	Sp. Gravity	Authority.
Amylene glycol. B. 177°	$C_5H_{10}\cdot(OH)_2$	.987, 0°	Wurtz. J. 11, 424.
Ethylmethylethylene glycol. B. 187°.5.	"	.9945, 0°	Wagner and Saytzeff. A. C. P. 179, 309.
	"	.9800, 19°	
Isopropylethylene glycol. B. 206°.	"	.9987, 0°	Flavitsky. A. C. P. 179, 353.
	"	.9843, 21°.5	
Methylpropylethylene glycol. B. 207°.	$C_6H_{12}\cdot(OH)_2$	.9669, 0°	Wurtz. J. 17, 516.
Dimethylbutyleneglycol.	"	.9759, 0°	Sorokin. B. S. C. 31, 72.
" " B. 220°	"	.9604, 24°	
Pseudohexylene glycol	"	.9638, 0°	Wurtz. J. 17, 513.
" "	"	.9202, 65°	
d. Hexylene glycol	"	.9809, 0°	Lipp. Ber. 18, 3283.
Pinakone. B. 177°	"	.96, 15°	Linnemann. J. 18, 315.
"	"	.96718, 15°	Perkin. J. P. C. (2), 32, 523.
"	"	.96087, 25°	
Octylene glycol.	$C_8H_{16}\cdot(OH)_2$	.932, 0°	DeClermont. J. 17, 517.
" " B. 235°–240°	"	.920, 29°	
Butyrone pinakone	$C_{14}H_{28}\cdot(OH)_2$	.87, 20°	Kurtz. A. C. P. 161, 205.
Diethylene alcohol	$C_4H_{10}O_3$	1.132, 0°	Wurtz. J. 16, 489.
Triethylene alcohol	$C_6H_{14}O_4$	1.138	" "

Name.	Formula.	Sp. Gravity	Authority.
Methylenedimethylether, or methylal.	$CH_2\cdot(OCH_3)_2$	.8551	Malaguti. Ann. (2), 70, 394.
" " "	"	.8604, 20°	Brühl. A. C. P. 203, 1.
" " "	"	.854, 20°	Arnhold. A. C. P. 240, 192.
Methylene diethyl ether	$CH_2\cdot(OC_2H_5)_2$	.851, 0°	Greene. J. Am. C. S. 1, 523.
" " "	"	.8275, 16°.5	L. Henry. C. R. 101, 599.
" " "	"	.834, 20°	Arnhold. A. C. P. 240, 192.
Methylene dipropyl ether	$CH_2(OC_3H_7)_2$	.8345, 20°	" "
Methylene diisopropyl ether.	"	.831, 20°	" "
Methylene diisobutyl ether.	$CH_2(OC_4H_9)_2$	.825, 20°	" "
Methylenediisoamylether	$CH_2(OC_5H_{11})_2$	.835, 20°	" "
Methylene dioctyl ether	$CH_2(OC_8H_{17})_2$	.846, 20°	" "
Ethylene monethyl ether	$C_2H_4\cdot OH\cdot OC_2H_5$	.926, 13°	Demole. Ber. 9, 746.
Ethylene diethyl ether	$C_2H_4\cdot(OC_2H_5)_2$	.7993, 0°	Wurtz. J. 11, 423.

Name.	Formula.	Sp. Gravity	Authority.
Ethidene dimethyl ether, or dimethyl acetal.	$C_2H_4\cdot(OCH_3)_2$	.8555, 0°	Wurtz. J. 9, 597.
" " "	"	.8674, 1°	Alsberg. J. 17, 485.
" " "	"	.8787, 0°	Dancer. J. 17, 484.
" " "	"	.8590, 14°	
" " "	"	.8503, 22°	
" " "	"	.8497, 23°	
" " "	"	.8476, 25°	
" " "	"	.8554, 15°	Kraemer and Grodzki. Ber. 9, 1930.

Name.	Formula.	Sp. Gravity.	Author
Ethidene dimethyl ether, or dimethyl acetal.	$C_2H_4.(OCH_3)_2$	.8655, 22°	Bachmann 218, 49.
" " "	"	.8013, 62°.7	Schiff. G. 177.
" " "	"	.85789, 15°	Perkin. (2), 32,
" " "	"	.84764, 25°	
Ethidene methyl ethyl ether, or methyl ethyl acetal	$C_2H_4.(OCH_3)(OC_2H_5)$	.8585, 0°	Wurtz.
" " "	"	.8433, 22°	Bachmann 218, 49.
" " "	"	.8655, 22°	Bachmann 218, 53.
Ethidene diethyl ether, or acetal.	$C_2H_4.(OC_2H_5)_2$	.842, 21°	Döbereine
" " "	"	.823, 20°	Liebig. A.
" " "	"	.821, 22°.4	Stas. J. 1
" " "	"	.8314, 20°	Brühl. A 203, 1.
" " "	"	.829, 18°	Engel and C. R. 90
" " "	"	.7363 } 108°.2	Schiff. G 177.
" " "	"	.7365 } 108°.2	
" " "	"	.826, 14°	Laatsch. 218, 26.
" " "	"	.8210, 22°	Bachmann 218, 49.
" " "	"	.83187, 15°	Perkin. (2), 32,
" " "	"	.82384, 25°	
Ethidene dipropyl ether, or propyl acetal. B. 147°	$C_2H_4.(OC_3H_7)_2$	.825, 22°.5	Girard. Be
Ethidene diisobutyl ether, or isobutyl acetal. B. 169°	$C_2H_4.(OC_4H_9)_2$	.816, 22°	"
Ethidene diamyl ether, or diamyl acetal.	$C_2H_4.(OC_5H_{11})_2$	.8347, 15°	Alsberg.
	"	.8012, 22°	Bachmann 218, 49.
Propidene dipropyl ether	$C_3H_6.(OC_3H_7)_2$	.8495, 0°	Schudel. 1283.
Butidene diethyl ether, or isobutyl acetal.	$C_4H_8.(OC_2H_5)_2$	.9957, 12°.4	Oeconomid 14, 1201
Dimethyl valeral	$C_5H_{10}.(OCH_3)_2$	.852, 10°	Alsberg.
Diethyl valeral	$C_5H_{10}.(OC_2H_5)_2$	.835, 12°	"
Diamyl valeral	$C_5H_{10}.(OC_5H_{11})_2$	.849, 7°	Alsberg.
Ethidene oxymethylate	$C_4H_8O.(OCH_3)_2$	.853, 12°.5	Laatsch. 218, 13.
Ethidene oxyethylate	$C_4H_8O(OC_2H_5)_2$	.891, 14°	"
Ethidene oxypropylate	$C_4H_8O(OC_3H_7)_2$	.895, 14°	"
Ethidene oxyisobutylate	$C_4H_8O(OC_4H_9)_2$	.879, 11°	"
Ethidene oxyisoamylate	$C_4H_8O(OC_5H_{11})_2$	.874, 11°	"
Ethylene diacetate	$C_2H_4.(C_2H_3O_2)_2$	1.128, 0°	Wurtz.
" "	"	1.1561, 20°	Brühl. I
" "	"	1.11076, 15°	Perkin. (2), 32,
" "	"	1.10183, 25°	
Ethylene dipropionate	$C_2H_4.(C_3H_5O_2)_2$	1.05440, 15°	"
" "	"	1.04566, 25°	
Ethylene dibutyrate	$C_2H_4.(C_4H_7O_2)_2$	1.024, 0°	Wurtz.
Propylene diacetate	$C_3H_6.(C_2H_3O_2)_2$	1.109, 0°	Wurtz.

..ME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
..iacetate	$C_3 H_6 . (C_2 H_3 O_2)_2$	1.070, 19°	Reboul. C. R. 79, 169.
..ivalerate	$C_3 H_6 . (C_5 H_9 O_2)_2$	.98, 12°	Reboul. J. C. S. 36, 127.
..monacetate	$C_4 H_8 . OH. (C_2 H_3 O_2)$	1.055, 0°	Wurtz. C. R. 97, 473.
..acetate	$C_6 H_{12} . (C_2 H_3 O_2)_2$	1.014, 0°	Wurtz. J. 17, 516.
..ene diacetate	"	1.009, 0°	Wurtz. J. 17, 518.
..cetate	$C_2 H_4 . (C_2 H_3 O_2)_2$	1.060, 12°	Schiff. Ber. 9, 306.
"	"	1.073, 15°	Franchimont. J. C. S. 44, 452.
"	"	1.073, 15°	Rübencamp. A. C. P. 225, 267.
"	"	1.07, 10°	Geuther. J. 17, 329.
..etate propio-	$C_2 H_4 . (C_2 H_3 O_2)(C_3 H_5 O_2)$	1.046, 15°	Two preparations. Rübencamp. A. C. P. 225, 267.
" "		1.042, 15°	
..ropionate	$C_2 H_4 . (C_3 H_5 O_2)_2$	1.020, 15°	Rübencamp. A. C. P. 225, 267.
..tate butyrate	$C_2 H_4 . (C_2 H_3 O_2)(C_4 H_7 O_2)$	1.016, 15°	Two preparations. Rübencamp. A. C. P. 225, 267.
" "		1.013, 15°	
..utyrate	$C_2 H_4 . (C_4 H_7 O_2)_2$	.9855, 15°	Rübencamp. A. C. P. 225, 267.
..tate valerate	$C_2 H_4 . (C_2 H_3 O_2)(C_5 H_9 O_2)$	.991, 15°	" "
..alerate	$C_2 H_4 . (C_5 H_9 O_2)_2$	.947, 15°	" "
..formate	$C_6 H_{10} O_5$	1.184, 21°	Geuther. A. C. P. 226, 228.
..acetate	$C_8 H_{14} O_5$	1.071, 16°	" "
..propionate	$C_{10} H_{18} O_5$	1.027, 26°	" "
..butyrate	$C_{12} H_{22} O_5$	.994, 20°	" "

9th. Ethers of Carbonic Acid.

..ME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
..onate	$(C H_3)_2 . C O_3$	1.069, 22°	Councler. Ber. 13, 1698.
"	"	1.065, 17°	B. Röse. Ber. 13, 2418.
"	"	1.060	Schreiner. Ber. 18, 2080.
..carbonate. B. 104°.	$C H_3 . C_2 H_5 . C O_3$	1.0372	" "
" B. 115°.	"	1.0016	" "
..ate	$(C_2 H_5)_2 . C O_3$	.975, 19°	Ettling. A. C. P. 19, 17.
	"	.9998, 0°	Kopp. A. C. P. 95, 307.
	"	.9780, 20°	
	"	.9762, 20°	Brühl. A. C. P. 203, 1.
	"	.9735	Schreiner. Ber. 18, 2080.

Name.	Formula.	Sp. Gravity.	Au[illegible]
Ethyl propyl carbonate	$C_2H_5 . C_3H_7 . CO_3$	.9516, 20°	Pawlev[illegible] 1607.
Propyl carbonate	$(C_3H_7)_2 . CO_3$	.968, 22°	Cabour[illegible] 746.
" "	"	.949, 17°	Röse. [illegible]
Butyl carbonate	$(C_4H_9)_2 . CO_3$	.9407, 0°	Lieben A. C[illegible]
" "	"	.9244, 20°	
" "	"	.9111, 40°	
Isobutyl carbonate	"	.919, 15°	Röse. [illegible]
Isoamyl carbonate	$(C_5H_{11})_2 . CO_3$	.9144	Medloc[illegible]
" "	"	.9065, 15°.5	Bruce.
" "	"	.912, 15°	Röse. [illegible]
Ethyl orthocarbonate	$(C_2H_5)_4 . CO_4$	.925	Bassett.
Propyl orthocarbonate	$(C_3H_7)_4 . CO_4$	.911, 8°	Röse. [illegible]
Isobutyl orthocarbonate	$(C_4H_9)_4 . CO_4$	.900, 8°	"

10th. Acids and Ethers of the Oxalic Series.

Name.	Formula.	Sp. Gravity.	Au[illegible]
Oxalic acid	$C_2H_2O_4$	2.00, 9°	Husem[illegible]
" "	$C_2H_2O_4 . 2H_2O$	1.507	Richter.
" "	"	1.622	Playfair M. C.
" "	"	1.629	Buignet
" "	"	1.63, 9°	Husema[illegible]
" "	"	1.680	Schröde[illegible] 851.
" "	"	1.531	Rüdorff. 251.
" "	"	1.57	W. C. S[illegible] J. P. [illegible]
" "	"	1.653, 18°.5	Wilson.
Succinic acid	$C_4H_6O_4$	1.55	Richter.
" "	"	1.529, 9°, sublimed.	Husem[illegible] Z.
" "	"	1.552, 9°, cryst.	
" "	"	1.567	Schröde[illegible] 851.
Ethyl oxalic acid	"	1.2175, 20°	Anschüt[illegible] 2412.
Pyrotartaric acid	$C_5H_8O_4$	1.408	Schröde[illegible] 1070.
" "	"	1.413	
Methylisopropylmalonic acid.	$C_7H_{12}O_4$	.990, 15°	Rombur[illegible] S. 32, [illegible]
Sebacic acid	$C_{10}H_{18}O_4$	1.1317, fused	Carlet.
Methyl oxalate	$C_4H_6O_4$	1.1566, 50°	Kopp. [illegible] 307.
" "	"	1.14[illegible]	
" "	"	[illegible]	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
·thyl oxalate	$C_5H_8O_4$	1.27, 12°	Chancel. J. 8, 470.
" "	"	1.15565, 0°	Wiens. Königsberg Inaug. Diss. 1887.
" "	"	.94693, 178°.7	
xalate	$C_6H_{10}O_4$	1.0929, 7°.5	Dumas and Boullay. P. A. 12, 480.
"	"	1.086, 12°	Delffs. J. 7, 26.
"	"	1.1010, 5°—10°	Regnault. P. A. 62, 50.
"	"	1.0958, 10°-15°	
"	"	1.0898, 15°-20°	
"	"	1.1016, 0°	Kopp. A. C. P. 94, 257.
"	"	1.0815, 18°.2	
"	"	1.0824, 15°	Mendelejeff. J. 13, 7.
"	"	1.0793, 20°	Brühl. A. C. P. 203, 1.
"	"	1.1023, 0°	Weger. A. C. P. 221, 61.
"	"	1.1029, 0°	
"	"	1.1030, 0°	
"	"	1.08563, 15°	Perkin. J. P. C. (2), 32, 523.
"	"	1.07609, 25°	
oxalate	$C_8H_{14}O_4$	1.018, 22°	Cahours. Les Mondes, 32, 280.
"	"	1.0884, 0°	Wiens. Königsberg Inaug. Diss. 1887.
"	"	.80601, 213°.5	
xalate	$C_{10}H_{18}O_4$	1.002, 14°	Cahours. C. C. 5, 20.
"	"	1.0099, 0°	Wiens. Königsberg Inaug. Diss. 1887.
"	"	.780, 243°.4	
heptyl oxalate	$C_{11}H_{20}O_4$	.99542, 0°	" "
" "	"	.75493, 263°.71	
oxalate	$C_{12}H_{22}O_4$	.968, 11°	Delffs. J. 7, 26.
l heptyl oxalate	"	.981435, 0°	Wiens. Königsberg Inaug. Diss. 1887.
" "	"	.72669, 284°.4	
l octyl oxalate	$C_{13}H_{24}O_4$	.97245, 0°	" "
" "	"	.71512, 291°.1	
l malonate	$C_5H_8O_4$	1.135, 22°	Osterland. J. C. S. (2), 13, 142.
"	"	1.16028, 15°	Perkin. J. P. C. (2), 32, 523.
"	"	1.15110, 25°	
"	"	1.1753, 0°	Wiens. Königsberg Inaug. Diss. 1887.
"	"	.95686, 180°.7	
malonate	$C_7H_{12}O_4$	1.068, 18°	Conrad and Bischoff. A. C. P. 204, 127.
"	"	1.06104, 15°	Perkin. J. P. C. (2), 32, 523.
"	"	1.05248, 25°	
"	"	1.07607, 0°	Wiens. Königsberg Inaug. Diss. 1887.
"	"	.86227, 198°.4	
opyl malonate	$C_8H_{14}O_4$	1.04977, 0°	" "
"	"	.88542, 211°	
[illegible]	$C_9H_{16}O_4$	1.02705, 0°	" "
[illegible]	"	.79966, 228°.3	
	$C_{11}H_{20}O_4$	1.0049, 0°	" "
	"	.800073, 261°.5	

Name.	Formula.	Sp. Gravity.	Auth
Methyl succinate	$C_6H_{10}O_4$	1.1179, 20°	Fehling. 195.
" "	"	1.1162, 18°	Weger.
" "	"	.91200, 195°.2	221, 6
" "	"	1.12611, 15°	Perkin.
" "	"	1.11718, 25°	(2), 82.
Methyl ethyl succinate	$C_7H_{12}O_4$	1.0925, 0°	Weger.
" " "	"	.86482, 208°.2	221, 6
Ethyl succinate	$C_8H_{14}O_4$	1.036	D'Arcet. 58, 291.
" "	"	1.0718, 0°	Kopp. A
" "	"	1.0475, 25°.5	307.
" "	"	1.0592 } 0°	
" "	"	1.0600	Weger.
" "	"	.82726, 215°.4	221, 6
" "	"	1.04645, 15°	Perkin.
" "	"	1.03852, 25°	(2), 82.
[illegible]	$C_9H_{16}O_4$	1.03966, 0°	Wiens-
"	"	.81476, 231°.1	berg L. 187.
[illegible]	$C_{10}H_{18}O_4$	1.0189, 0°	—
		[illegible], 247°.1	
[illegible]		1.009, 0°	Silva. C.
	"	[illegible] 18°.5	
[illegible]	"	[illegible], 0°	Wiens-
		[illegible]	berg L. 187.
[illegible]	[illegible]	[illegible], 0°	—
		[illegible]	
[illegible]	[illegible]	[illegible]	Perkin. [illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		[illegible]	[illegible]
[illegible]		[illegible]	[illegible]
[illegible]		[illegible]	[illegible]

Name.	Formula.	Sp. Gravity.	Authority.
l dimethylmalonate	$C_9 H_{16} O_4$	1.00153, 15°	Perkin. J. P. C.
"	"	.99356, 25°	(2), 32, 523.
adipate	$C_{10} H_{18} O_4$	1.001, 20°.5	Malaguti. A. C. P. 56, 306.
methylethylmalo- l.	"	.994, 15°	Conrad and Bischoff. Ber. 13, 595.
propylmalonate	"	.99309, 15°	Perkin. J. P. C.
"	"	.98541, 25°	(2), 32, 523.
isopropylmalonate	"	.997, 20°	Conrad and Bischoff. Ber. 13, 595.
"	"	.99271, 15°	Perkin. J. P. C.
"	"	.98521, 25°	(2), 32, 523.
dimethylsuccinate	"	.9976, 17°	Levy and Engländer. A. C. P. 242, 201.
"	"	1.0134, 17°	Barnstein. A. C. P. 242, 126.
ethylsuccinate	"	1.030, 21°	Polko. A. C. P. 242, 113.
diethylmalonate	$C_{11} H_{20} O_4$	.990, 16°	Conrad and Bischoff. A. C. P. 204, 139.
"	"	1.0041, 0°	Shukowski. Ber. 21,
"	"	.9901, 15°	ref. 57.
"	"	.99167, 15°	Perkin. J. P. C.
"	"	.98441, 25°	(2), 32, 523.
isobutylmalonate	"	.983, 15°	Conrad and Bischoff. Ber. 13, 595.
secondary-butyl- nate.	"	.988, 15°	Romburgh. Ber. 20, ref. 376.
methylisopropyl- nate.	"	.990, 15°	Romburgh. Ber. 20, ref. 469.
l suberate	$C_{10} H_{18} O_4$	1.014, 18°	Laurent. Ann. (2), 66, 162.
suberate	$C_{12} H_{22} O_4$	1.003, 18°	Laurent. Ann. (2), 166, 160.
"	"	.991, 15°	Hell. B. S. C. 19, 365.
"	"	.98519, 15°	Perkin. J. P. C.
"	"	.97826, 25°	(2), 32, 523.
tetramethylsucci-	"	1.012, 0°	Hell and Wittekind.
"	"	1.0015, 13°.5	Ber. 7, 319.
sebate	"	.985, 60°, l.	Neison. J. C. S. (3), 1, 316.
sebate	$C_{14} H_{26} O_4$	.965, 16°	Neison. J. C. S. (3), 1, 318.
"	"	.96824, 15°	Perkin. J. P. C.
"	"	.96049, 25°	(2), 32, 523.
sebate	$C_{18} H_{34} O_4$	.9417, 0°	Gehring. C. R. 104,
"	"	.9329, 15°	1289.
sebate	$C_{20} H_{38} O_4$	.951, 18°	Neison. C. N. 32, 298.
dioctylmalonate	$C_{23} H_{44} O_4$	.896, 18°	Conrad and Bischoff. Ber. 13, 595.
acetomalonate	$C_9 H_{14} O_5$	1.080, 23°	Ehrlich. B. S. C. 28, 73.
acetosuccinate	$C_{10} H_{16} O_5$	1.079, 21°	Conrad. B. S. C. 28, 73.
"	"	1.08809, 15°	Perkin. J. P. C.
"	"	1.08049, 25°	(2), 32, 523.

Name.	Formula.	Sp. Gravity.	Authority.
Ethyl acetoglutarate	$C_{11} H_{18} O_5$	1.0505, 14°.1	Wislicenus and Limpach. A.C.P. 192, 180.
Ethyl β methylacetosuccinate.	"	1.061, 27°	Hardtmuth. A.C.P. 192, 142.
Ethyl α methylacetoglutarate.	$C_{12} H_{20} O_5$	1.048, 20°	Wislicenus and Limpach. A.C.P. 192, 188.
Ethyl dimethylacetosuccinate.	"	1.057, 27°	Hardtmuth. A.C.P. 192, 142.
Ethyl β ethylacetosuccinate.	"	1.064, 16°	Thorne. J.C.S. 39, 337.
Ethyl lactosuccinate	$C_{11} H_{18} O_6$	1.119, 0°	Wurtz and Friedel. J. 14, 378.
Ethyl succinosuccinate	$C_{12} H_{16} O_6$	1.4057, 18°	Hermann. J.C.S. 42, 712.
Ethyl ethidenemalonate	$C_9 H_{14} O_4$	1.0435, 15°	Komnenos. A.C.P. 218, 158.

11th. Acids and Ethers of the Glycollic Series.

Name.	Formula.	Sp. Gravity.	Authority.
Glycollic acid	$C_2 H_4 O_3$	1.197, 13°	Cloëz. J. 5, 497.
Lactic acid	$C_3 H_6 O_3$	1.215, 10°	Gay Lussac and Pelouze. P. A. 29, 111.
" "	"	1.2485, 15°	Mendelejeff. J. 13, 7.
" "	"	1.2403, 20°	Brühl. Bei. 4, 782.
Methyl glycollic acid	"	1.180	Heintz. J. 12, 359.
Ethyl oxyisobutyric acid	$C_6 H_{12} O_3$	1.0211, 0°	Hell and Waldbauer. Ber. 10, 450.
" " "	"	1.0101, 16°	
Amyl glycollic acid	$C_7 H_{14} O_3$	1.003	Siemens. J. 14, 451.
Methyl glycollate	$C_3 H_6 O_3$	1.1862	Schreiner. Bei. 3, 350.
Ethyl glycollate	$C_4 H_8 O_3$	1.1074	" "
" "	"	1.0833	Fahlberg. J. P. C. (2), 7, 340.
Propyl glycollate	$C_5 H_{10} O_3$	1.0837	Schreiner. Bei. 3, 350.
Methyl methylglycollate	$C_4 H_8 O_3$	1.0845	" "
Ethyl methylglycollate	$C_5 H_{10} O_3$	1.0746	" "
Propyl methylglycollate	$C_6 H_{12} O_3$	1.0592	" "
Methyl ethylglycollate	$C_5 H_{10} O_3$	1.0105	" "
Ethyl ethylglycollate	$C_6 H_{12} O_3$	.978	Schreiber. Z. C. 13, 168.
" "	"	.9960	Schreiner. Bei. 3, 350.
Propyl ethylglycollate	$C_7 H_{14} O_3$	.9896	" "

...ame.	Formula.	Sp. Gravity.	Authority.
›ylglycollate	$C_6H_{12}O_3$	.9845	Schreiner. Bei. 8, 850.
·lglycollate	$C_7H_{14}O_3$	.9758	" "
›ylglycollate	$C_8H_{16}O_3$	.9678	" "
ate	$C_4H_8O_3$	1.1176	" "
e	$C_5H_{10}O_3$	1.0542, 0°	Wurtz and Friedel. J. 14, 878.
	"	1.042, 18°	
	"	1.0540	Schreiner. Bei. 8, 850.
·llactate	$C_6H_{12}O_3$	1.0030	" "
lactate	$C_7H_{14}O_3$	.9208, 0°	Wurtz. J. 12, 294.
"	"	.9540	Schreiner. Bei. 8, 850.
obutyrate	$C_8H_{12}O_3$	.9981, 18°	Frankland and Duppa. P.T. 1866, 809.
"	"	1.0750	Schreiner. Bei. 8, 850.
yloxybutyrate	$C_7H_{14}O_3$	.9768, 13°	Frankland and Duppa. J. 18, 881.
"	"	1.0100	Schreiner. Bei. 8, 850.
oxybutyrate	$C_8H_{16}O_3$	.930, 19°	Duvillier. Ann. (5), 17, 538.
"	"	.9540	Schreiner. Bei. 8, 850.
hyloxyacetate	$C_7H_{14}O_3$	.9896, 16°.5	Frankland and Duppa. P.T. 1866, 809.
yloxyacetate	$C_8H_{16}O_3$	.9618, 18°.7	" "
"	"	.98	L. Henry. B. S. C. 19, 212.
yloxyacetate	$C_{11}H_{22}O_3$	.93227, 18°	Frankland and Duppa. P.T. 1866, 809.
hydroxalate	$C_9H_{18}O_3$	.9449, 13°	Frankland and Duppa. J. 18, 382.
amylhydroxa-late	$C_{11}H_{22}O_3$	.9399, 13°	Frankland and Duppa. P.T. 1866, 809.
yloxalate	$C_{14}H_{28}O_3$	.9187, 18°	Frankland and Duppa. J. 18, 383.
glycollate	$C_6H_{10}O_4$	1.0098, 17°	Heintz. J. 15, 292.
actate	$C_7H_{12}O_4$	1.0458, 17°	Wislicenus. J. 15, 300.
›noglycollate	"	1.0052, 22°	Senf. Ber. 14, 2416.
oglycollate	$C_8H_{14}O_4$	1.0288, 22°	" "
yroglycollate	"	1.0240, 22°.5	" "
olactate	$C_9H_{16}O_4$	1.024, 0°	Wurtz. J. 12, 295.
"	"	1.028, 0°	Wurtz. J. 13, 278.
lactate	$C_8H_{14}O_5$	1.134, 0°	Wurtz and Friedel. J. 14, 877.
lglyoxylate	$C_8H_{16}O_4$	.994, 18°	Schreiber. Z. C. 13, 168.
lactone	$C_4H_6O_2$	1.1441, 0°	Saytzeff Ber. 14, 2688.
"	"	1.1286, 16°	
"	"	1.1802, 20°	Frühling. Ber. 15, 2622.
	"	1.1295, 10°	Henry. C. R. 101, 1158.

Name.	Formula.	Sp. Gravity.	Auth
Ethylbutyric lactone	$C_6 H_{10} O_2$	1.0348, 16°	Chanlaro 226, 33
Heptolactone	$C_7 H_{12} O_2$	.9818, 4°	Amthor. 1718.
"	"	.992, 16°	Young. 216, 41

12th. Acids and Ethers of the Pyruvic Series.

Name.	Formula.	Sp. Gravity.	Auth
Pyruvic, pyroracemic, or acetyl-formic acid.	$C_3 H_4 O_3$	1.288, 18°	Völckel.
" "	"	1.2792	Berzelius.
" "	"	1.2403	Claisen a well. Be
" "	"	1.2600	
" "	"	1.2415	Claisen a. well. B
Propionyl-formic acid	$C_4 H_6 O_3$	1.2000, 17°.5	Claisen an Ber. 13,
β. Acetyl-propionic, or laevulinic acid.	$C_5 H_8 O_3$	1.135, 15°	Conrad. 2178.
Methyl pyruvate	$C_4 H_6 O_3$	1.154, 0°	Oppenhein 19, 254.
Methyl acetacetate	$C_5 H_8 O_3$	1.037, 9°	Brandes.
Ethyl acetacetate	$C_6 H_{10} O_3$	1.03, 5°	Geuther.
" "	"	1.0256, 20°	Brühl. 203, 1.
" "	"	1.030, 15°	Elion. Be 568.
" "	"	1.0465, 0°	Schiff. Be
" "	"	.9880, 55°.8	
" "	"	.9644, 79°.2	
" "	"	.9029, 135°.5	
" "	"	.8458, 180°	
" "	"	1.03174, 15°	Perkin. J (2), 32, 5
" "	"	1.02353, 25°	
Isobutyl acetacetate	$C_8 H_{14} O_3$	.979, 0°	Emmerlin Oppenh 9, 1097.
"	"	.932, 23°	
Amyl acetacetate	$C_9 H_{16} O_3$	.954, 10°	Conrad. A. 231.
[illegible]	[illegible]	[illegible]	Brandes. J.
[illegible]	[illegible]	[illegible], 14°	"
[illegible]	[illegible]	[illegible], 0°	Grote, Kd Tollens. 206, 2[illegible]
		[illegible], 20°	
[illegible]	[illegible]	[illegible], 0°	" [illegible]
		[illegible], 20°	
[illegible]	[illegible]	[illegible], 0°	
		[illegible], 20°	

Name.	Formula.	Sp. Gravity.	Authority.
hylacetacetate	$C_7 H_{12} O_3$	1.009, 6°	Geuther. J. 18, 303.
lacetacetate	$C_8 H_{14} O_3$	.998, 12°	" "
"	"	.981, 16°	James. A. C. P. 226, 202.
"	"	.9834, 16°	Frankland and Duppa.
ylacetacetate	$C_9 H_{16} O_3$	.981, 0°	Burton. A. C. J. 3, 385.
lacetacetate	$C_{11} H_{20} O_3$	.937, 26°	Conrad. A.C.P. 186, 232.
ethylacetacetate	$C_8 H_{14} O_3$	.9913, 16°	Frankland and Duppa. J. 18, 309.
ionylpropionate	"	.9948, 0°	Hellon and Oppenheim. Ber. 10, 701 and 861.
"	"	.9827, 15°	
"	"	.9870, 15°	Israel. A. C. P. 231, 197.
hylethylacetace-	$C_9 H_{16} O_3$	.974, 22°	Saur. A. C. P. 188, 275.
ropylacetacetate	"	98046, 0°	Frankland and Duppa. J. 20, 395.
thylpropylacet-	$C_{10} H_{18} O_3$	.9575, 17°	Jones. A. C. P. 226, 288.
utylacetacetate	"	.951, 17°.5	Rohn. A. C. P. 190, 307.
ylpropionylpro-	"	.966, 15°	Israel. A. C. P. 231, 197.
opylacetacetate	$C_{12} H_{22} O_3$	.9585, 0°	Burton. A. C. J. 3, 386.
tylacetacetate	$C_{13} H_{24} O_3$	.9324	Jourdan. Ber. 18, 434.
lacetacetate	$C_{14} H_{26} O_3$	.9354, 18°.5	Guthzeit. A. C. P. 204, 3.
sobutylacetace-	"	.947, 10°	Mixter. Ber. 7, 501.
ptylacetacetate	$C_{20} H_{38} O_3$	.8907, 17°.5	Jourdan. J. C. S. 38, 314.
opyruvate	$C_7 H_{10} O_4$	1.124, 21°	Claisen and Stylos. Ber. 20, 2189.
ctylacetate	$C_8 H_{12} O_4$	1.044, 15°	Elion. Ber. 16, 1869.
"	"	1.1, 15°	Elion. Ber. 16, 2762.
"	"	1.064, 15°	James. A. C. P. 226, 202.
acetacetate	$C_8 H_{10} O_3$	1.136, 27°	Duisberg. Ber. 15, 1387.
ylideneacetace-	$C_8 H_{12} O_3$	1.0225, 15°	Claisen and Matthews. A. C. P. 218, 173.
ylideneacetace-	$C_{11} H_{18} O_3$	.9612, 15°	Matthews. Ber. 16, 1372.
oxylmethylacet-	$C_9 H_{16} O_4$	.976, 22°	Isbert. A. C. P. 234, 195.
thoxylethylacet-	$C_{10} H_{18} O_4$	.957, 22°	Isbert. A. C. P. 234, 194.

13th. Acids and Ethers of the Acrylic Series.

NAME.	FORMULA.	SP. GRAVITY.	AUTHOR
Methylacrylic acid	$C_4H_6O_2$	1.0158, 20°	Brühl. Ber.
β. Crotonic, or quartenylic acid.	"	1.018, 25°	Geuther. J. 3, 442.
Pyroterebic acid	$C_6H_{10}O_2$	1.01	Rabourdin. 52, 396.
" "	"	1.006, 26°	Mielck. A. 52.
Methylethylacrylic acid	"	.9812, 25°	Lieben and M. C. 4,
Hydrosorbic acid	"	.969, 19°	Barringer tig. Z. C.
Amyldecatoic acid	$C_{10}H_{18}O_2$	.9096, 0°	Borodin.
Moringic acid	$C_{15}H_{28}O_2$	.908, 12°.5	Walter. C 1142.
Oleic acid	$C_{18}H_{34}O_2$	.908, 19°	Chevreul.
Methyl acrylate. B. 80°.3	$C_4H_6O_2$	.977, 0°	Kahlbaum. 2349.
" "	"	.961, 19°.2	
" "	"	.97388, 0°	Weger. A. 61.
" "	"	.87194, 80°.3	
Liquid polymer of methyl acrylate.	$(C_4H_6O_2)_n$	1.140, 0°	Kahlbaum. 2349.
" "	"	1.125, 18°	
Solid polymer of methyl acrylate.	"	1.2228, 15°.6	"
" "	"	1.2222, 18°.2	
Ethyl acrylate. B. 98°.5	$C_5H_8O_2$	.9252, 0°	Caspary and B. S. C.
" "	"	.9136, 15°	
" "	"	.93928, 0°	Weger. A. 61.
" "	"	.81970, 98°.5	
Propyl acrylate. B. 122°.9	$C_6H_{10}O_2$	.91996, 0°	"
" "	"	.7847, 122°.9	
Methyl crotonate	$C_5H_8O_2$	.9806, 4°	Kahlbaum. 344.
Ethyl crotonate	$C_6H_{10}O_2$	.9188, 20°	Brühl. A. C.
" "	"	.9199, 20°	
" "	"	.9237, 20°	
" "	"	.93680, 15°	Perkin. J. (2), 32,
" "	"	.91846, 25°	
Ethyl β crotonate	"	.927, 19°	Geuther. J. (2), 3, 44
Ethyl angelate	$C_7H_{12}O_2$	.9347, 0°	Beilstein and gand. 2261.
Ethyl tiglate	"	.926, 21°	Geuther and lich. Z. C.
" "	"	.9425, 0°	Beilstein gand. 2261.
Ethyl ethylcrotonate	$C_8H_{14}O_2$	.9298, 18°	[illegible]
Methyl oleate	$C_{19}H_{36}O_2$	.879, 18°	[illegible]
Ethyl oleate	$C_{20}H_{38}O_2$	.871, 18°	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Ethyl oleate	$C_{20}H_{38}O_2$	.87589 } 15°	Perkin. J. P. C. (2), 32, 523.
" "	"	.87525 } 15°	
" "	"	.87041 } 25°	
" "	"	.86991 } 25°	
Methyl elaidate	$C_{19}H_{36}O_2$	.872, 18°	Laurent. Ann. (2), 65, 294.
Ethyl elaidate	$C_{20}H_{38}O_2$	.869, 18°	" "

14th. Derivatives of the Acrylic Series.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Acrolein, or acrylaldehyde	C_3H_4O	.8410, 20°	Brühl. Bei. 4, 780.
Metacrolein	$(C_3H_4O)_n$	1.03, 8°	Geuther. J. 17, 334.
Acropinacone	$C_6H_{10}O_2$	.99, 17°	Linnemann. J. 18, 317.
Acrolein ethylate	$C_5H_{10}O_2$	.936, 4°	Taubert. J. C. S. 31, 296.
Acrolein diacetate	$C_7H_{10}O_4$	1.076, 22°	Hübner and Geuther. J. 13, 307.
Crotonaldehyde	C_4H_6O	1.033, 0°	Roscoe and Schorlemmer's Treatise.
Diacetate from crotonaldehyde.	$C_8H_{12}O_4$	1.05, 14°	Lagermark and Eltekoff. Ber. 12, 694.
Tiglic aldehyde, or guajol	C_5H_8O	.871, 15°	Völckel. J. 7, 611.
β Angelicalactone	$C_5H_6O_2$	1.1084, 0°	Wolff. A. C. P. 229, 257.
Methylethylacrolein	$C_6H_{10}O$	.8577, 20°	Lieben and Zeisel. M. C. 4, 18.
Amyldecaldehyde	$C_{10}H_{18}O$	.862, 0°	Borodin. Ber. 5, 480.
"	"	.848, 20°	Borodin. Ber. 5, 480.
"	"	.861, 0°	Gäss and Hell. Ber. 8, 372.
"	"	.851, 14°	Gäss and Hell. Ber. 8, 372.
Hexylpentylacrylic aldehyde.	$C_{14}H_{26}O$	.8494, 15°	Perkin, Jr. Ber. 15, 2804.
" "	"	.8416, 30°	
" "	"	.8392, 35°	
" "	"	.8504, 15°	Perkin, Jr. J. C. S. 44, 81.
Hexylpentylacrylic alcohol.	$C_{14}H_{28}O$	.8520, 15°	Perkin, Jr. Ber. 15, 2810.
" "	"	.8444, 30°	
" "	"	.8418, 35°	
Hexylpentylacrylic acetate.	$C_{16}H_{30}O_2$	.8680, 15°	Perkin, Jr. Ber. 15, 2809.
" "	"	.8597, 30°	
" "	"	.8568, 35°	

15th. Acids and Ethers, Malic-Tartaric Group.

Name.	Formula.	Sp. Gravity.	Authori
Malic acid	$C_4 H_6 O_5$	1.559, 4°	Schröder. I 1611.
Tartaric acid	$C_4 H_6 O_6$	1.75	Richter.
" "	"	1.764	Schiff. J. 1
" "	"	1.739	Buignet. J
" "	"	1.754	Schröder. I 851.
" "	"	1.77	W. C. Smitl J. P. 53, 1
" "	"	1.7617	Wiedeman Lüdekin (2), 25, 1
" " Amorphous	"	1.6321	
" "	"	1.7594, 7°	Perkin. J. 366.
Racemic acid	$C_4 H_6 O_6$	1.7782, 7°	"
" "	$C_4 H_6 O_6 . H_2 O$	1.75	Pasteur. J
" "	"	1.69	Buignet. J
" "	"	1.6873, 7°	Perkin. J. 366.
Laevotartaric acid	"	1.7496	Pasteur. A 28, 72.
Methyl maleate	$C_6 H_8 O_4$	1.1529, 14°	Anschütz. 2283.
" "	"	[illegible]	
" "	"	[illegible]	
" "	"	[illegible]	
" "	"	[illegible]	Knops. 1887. 17
" "	"	[illegible]	
" "	"	[illegible]	
" "	"	[illegible]	
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]
" "	"	[illegible]	Anschütz. [illegible]
" "	"	[illegible]	Knops. 1887. 17.
[illegible]	[illegible]	[illegible]	
		[illegible]	
		[illegible]	
		[illegible]	
[illegible]	[illegible]	[illegible]	Anschütz [illegible]
[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	Anschütz [illegible]
		[illegible]	
		[illegible]	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Ethyl racemate	$C_8H_{14}O_6$	1.2098, 15°	Perkin. J. C. S. 51, 363.
" "	"	1.2019, 25°	
Propyl tartrate	$C_{10}H_{18}O_6$	1.1392, 17°	Anschütz and Pictet. Ber. 13, 1177.
Isopropyl tartrate	$C_{10}H_{18}O_6$	1.1300, 20°	Pictet. Ber. 15, 2242.

16th. Acids and Ethers, Citric Acid Group.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Citric acid	$C_6H_8O_7$	1.617	Richter.
" "	"	1.542	Schiff. J. 12, 41.
" "	"	1.553	Buignet. J. 14, 15.
" "	"	1.557	W. C. Smith. Am. J. P. 53, 145.
Itaconic acid	$C_5H_6O_4$	1.578	Schröder. Ber. 13, 1070.
" "	"	1.632	
Citraconic acid	"	1.616	" "
" "	"	1.618	
Citraconic anhydride	$C_5H_4O_3$	1.247	Watts' Dictionary.
" "	"	1.25360, 12°.4	Knops. V. H. V. 1887, 17.
" "	"	1.24894, 16°.6	
" "	"	1.24518, 20°	
" "	"	1.24405, 21°	
" "	"	1.23920, 25°.4	
" "	"	1.23501, 29°.2	
" "	"	1.23073, 33°	
Triethyl citrate	$C_{12}H_{20}O_7$	1.142, 21°	Malaguti. A. C. P. 21, 267.
" "	"	1.1369, 20°	Conen. Ber. 12, 1653.
Tetrethyl citrate	$C_{14}H_{24}O_7$	1.1022, 20°	" "
Ethyl aconitate	$C_{12}H_{18}O_6$	1.074, 14°	Watts' Dictionary.
" "	"	1.1064	Conen. Ber. 12, 1653.
Ethyl isaconitate	"	1.0505, 15°	Conrad and Guthzeit. A. C. P. 222, 255.
Methyl itaconate	$C_7H_{10}O_4$	1.1399, 14°.7	Anschütz. Ber. 14, 2787.
" "	"	1.13195, 12°	Knops. V. H. V. 1887, 17.
" "	"	1.12410, 18°	
" "	"	1.12182, 20°	
" "	"	1.11882, 22°.5	
" "	"	1.11421, 27°.1	
" "	"	1.10847, 32°.4	
Polymer of methyl itaconate.	$(C_7H_{10}O_4)_n$	1.3126, 20°	" "
Ethyl itaconate	$C_9H_{14}O_4$	1.051, 15°	Anschütz. Ber. 14, 2787.
" "	"	1.04613, 20°	Knops. V. H. V. 1887, 17.
Polymer of ethyl itaconate	$(C_9H_{14}O_4)_n$	1.2549, 20°	" "

NAME.	FORMULA.	SP. GRAVITY.	AUTHORI
Diacetin	$C_7 H_{12} O_5$	1.184	Berthelot.
"	"	1.148, 23°	Laufer. J.1
Triacetin	$C_9 H_{14} O_6$	1.174	Berthelot.
Epiacetin	$C_5 H_8 O_3$	1.129, 20°	Breslauer. (2), 20, 1
Polymer of epiacetin	$(C_5 H_8 O_3)_n$	1.204, 20°	"
Monobutyrin	$C_7 H_{14} O_4$	1.088	Berthelot.
Dibutyrin	$C_{11} H_{20} O_5$	1.081 }	"
"	"	1.084 }	
Tributyrin	$C_{15} H_{26} O_6$	1.056	Berthelot.
Monovalerin	$C_8 H_{16} O_4$	1.100	Berthelot.
Divalerin	$C_{13} H_{24} O_5$	1.059	"
Cocinin	$C_{42} H_{80} O_6$	.92, 8°, s.	Brandes.
Tristearin	$C_{57} H_{110} O_6$	.987, 10°	Kopp. A. 194.
"	"	.9872 } 15°	Three
"	"	.9877 } 15°	tions.
"	"	.9867 } 15°	5, 510.
"	"	.9600, 51°.5	
"	"	1.0101, 15°	
"	"	1.0178 } 15°	
"	"	1.0179 } 15°	
"	"	1.009, 51°.5	
"	"	.9931, 65°.5	
"	"	.9746, 68°.2	
" Liquid	"	.9245, 65°.5	
Monolein	$C_{21} H_{40} O_4$	.947	Berthelot.
Diolein	$C_{39} H_{72} O_5$	.921, 21°	"
Ethyl glycerate	$C_5 H_{10} O_4$	1.193, 6°	Henry. B
Benzoicin	$C_{10} H_{12} O_4$	1.228	Berthelot.
Glycerin salicylate	$C_{10} H_{12} O_5$	1.3655	Göttig. Be
Glycerin cinnamate		1.2704 }	Kahlbaum
" "		1.2708 }	1491.

18th. The Allyl Group.

NAME	FORMULA.	SP. GRAVITY.	AUTHO
Allyl alcohol	$C_3 H_5 O H$	[illegible]	Tollens a… ninger. 156, 13
" "	"	[illegible]	
"		[illegible]	Additional are given A. C. P.
"		[illegible]	
"	"	[illegible]	
		[illegible]	Dittmar and P. R. S.
		[illegible]	Thorpe. 371.
		[illegible]	
		[illegible]	[illegible] 224, [illegible]
		[illegible]	
		[illegible]	8

17th. Glycerin and its Derivatives.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
ι, or glycerol	$C_3H_5(OH)_3$	1.27, 10°	Chevreul.
"	"	1.28, 15°	Pelouze. Ann. (2), 68, 19.
"	"	1.260, 15°.5	Watts' Dictionary.
"	"	1.115, 12°.5	Sokoloff. A. C. P. 106, 95.
"	"	1.2636, 15°	Mendelejeff. J. 13, 7.
"	"	1.26949, 6°.7	Mendelejeff. A. C. P. 114, 165.
"	"	1.26244, 16°.6	
"	"	1.2609	Godeffroy. C. C. (3), 6, 34.
" Cryst.	"	1.261, 15°.5	Roos. C. N. 33, 39.
"	"	1.2688, 0°	Emo. Bei. 6, 668.
"	"	1.2590, 20°	Brühl. Bei. 4, 782.
"	"	1.262, 17°.5	Strohmer. Ber. 17, ref. 206.
"	"	1.2653, 15°	Gerlach. Ber. 17, ref. 522.
"	"	1.26241, 15°	Perkin. J. P. C. (2), 32, 523.
"	"	1.25881, 25°	
lycerin	$C_6H_{11}(OH)_3$	1.0936, 0°	Orloff. A. C. P. 233, 359.
diglycerin	$C_{12}H_{26}O_5$	1.00, 14°	Reboul and Lourenço. J. 14, 675.
ether	$(C_3H_5)_2O_3$	1.0907, 18°	Gegerfeldt. J. 24, 401.
"	"	1.16, 16°	Zotta. A. C. P. 174, 87.
"	"	1.1453, 0°	Silva. J. C. S. 40, 1122.
	$C_3H_6O_2$	1.165, 0°	Hanriot. Ann. (5), 17, 62.
lycide	$C_5H_{10}O_2$	*a*1.00	Reboul. J. 13, 465.
"	"	.94, 12°	Henry. B. S. C. 16, 282.
ycide	$C_8H_{16}O_2$	.90, 20°	Reboul. J. 13, 463.
yceral	$C_5H_{10}O_3$	1.081, 0°	Harnitzky and Menschutkin. J. 18, 506.
lyceral	$C_8H_{16}O_3$	1.027, 0°	" "
lin	$C_6H_{14}O_3$	.9483, 0°	Alsberg. J. 17, 495.
ı	$C_7H_{16}O_3$	.92	Berthelot. J. 7, 450.
n	$C_9H_{20}O_3$	.8955, 15°	Alsberg. J. 17, 495.
in tetrethylin	$C_{17}H_{26}O_7$	1.022, 14°	Reboul and Lourenço. J. 14, 675.
lin	$C_{10}H_{22}O_3$	.92	Reboul. J. 13, 465.
in	$C_8H_{18}O_3$	.98, 20°	Reboul. J. 13, 464.
	$C_{13}H_{28}O_3$	.907, 9°	Reboul. J. 13, 465.
is	$C_6H_{12}O_3$	1.1160, 0°	Tollens. A. C. P. 156, 149.
	"	1.1013, 25°	
	$C_5H_8O_5$	1.304, 15°	Van Romburgh. Ber. 14, 2827.
	C[illegible] $H_{20}O_6$	1.20	Berthelot. J. 6, 455.

NAME.	FORMULA.	SP. GRAVITY.	AUTHO[RITY].
Cane sugar, or saccharose	$C_{12}H_{22}O_{11}$	1.58046, 17°.5	Gerlach.
" " " Fused, vitreous.	"	1.996, 14°.5	Morin. J.[illegible] 28, 34.
" " " Molten	"	1.6	Quincke. 141.
" " "	"	1.5984	Wiedem[illegible] Lüdek[illegible] (2), 25[illegible]
" " " Barley sugar.	"	1.5122	
" " "	"	1.5928	Zehnder. 29, 260.
Milk sugar, or lactose	"	1.534	Filhol.
" " "	"	1.53398, 4°	Playfair [illegible] J. C. S.
" " "	"	1.525, 4°	Schröder. 561.
" " "	"	1.533	W. C. Sm[illegible] J. P. 5[illegible]
Melezitose	$C_{12}H_{22}O_{11}.H_2O$	1.540, 17°.5	Alekhine. 684.
Glucose	$C_6H_{12}O_6.H_2O$	1.3861	Payen an[illegible]
"	"	1.391	
"	"	1.54 } 11°	Bödeker.
"	"	1.57	
" Fused	"	1.8	Quincke. 141.
Inosite. Anhydrous	$C_6H_{12}O_6$	1.752	Tanret an[illegible] Ann. ([illegible]
"	$C_6H_{12}O_6.2H_2O$	1.1154, 5°	Vohl. J.[illegible]
"	"	1.535, 8°	Tanret an[illegible] C. R. 8[illegible]
"	"	1.524, 15°	
Bergenite	$C_8H_{10}O_5.H_2O$	1.5445	Morelli. 2694.
Starch	$(C_6H_{10}O_5)_n$	1.505	Payen.
"	"	1.530	Dietrich. 51.
"	"	1.56	Kopp. A[illegible] 33.
" Arrowroot	"	1.5045, air dried	Flückig[illegible] 10, 44[illegible]
" Potato	"	1.5029, "	
" "	"	1.6330, dried at 100°.	
Dextrin	"	1.03848	O'Sulliva[illegible] 880.
Inulin	"	1.470	Dragendo[illegible] 748.
"	"	1.462	Dubrunfa[illegible]
"	"	1.3491	Kiliani. 205, 15[illegible]
Cellulose	"	1.525	Weltzien' [illegible]
Gum	"	1.487, air dried	[illegible]
"	"	1.525, dried at 100°.	
" Gum-arabic	"	1.355	[illegible]
" " tragacanth	"	1.384	
" Senegal	"	1.436	
" Bussora	"	1.359	

Name.	Formula.	Sp. Gravity.	Authority.
	$6\ C_6H_{10}O_5 . H_2O$	1.522, 12°	Ekstrand and Johanson. Ber. 21, 594.
	"	1.480	
iglucose	$C_{12}H_{14}(C_2H_3O_2)_8O_{11}$	1.27, 16°	Demole. Ber. 12, 1936.
accharose	"	1.27, 16°	" "

20th. Miscellaneous Non-Aromatic Compounds.

Name.	Formula.	Sp. Gravity.	Authority.
yl alcohol	$C_5H_{10}O_2$	1.00514, 15°	Perkin, Jr. J. C. S. 51, 830.
"	"	1.00197, 20°	
"	"	.99896, 25°	
l alcohol	$C_6H_{12}O_2$	1.0143, 0°	Lipp. Ber. 18, 3281.
"	"	.99771, 4°	Perkin, Jr. J. C. S. 51, 719.
"	"	.98947, 15°	
"	"	.98270, 25°	
thoformate	$C_4H_{10}O_3$	.974, 23°	Deutsch. Ber. 12, 115.
oformate	$C_7H_{16}O_3$	.8964	Williamson
hoformate	$C_{10}H_{22}O_3$	.879, 23°	Deutsch. Ber. 12, 115.
rthoformate	$C_{13}H_{28}O_3$	.861	" "
thoformate	$C_{16}H_{34}O_3$	.864	" "
ether	$C_8H_{18}O_3$	.8924, 21°	Lieben. J. 20, 546.
of isobutylal-	$C_8H_{14}O$	.9575, 0°	Oeconomides. Ber. 14, 2581.
"	$C_{10}H_{20}O_2$	.9415, 0°	" "
of valeral	$C_{10}H_{18}O$	.9027, 17°	Borodin. J. 17, 339.
"	$C_{20}H_{38}O_2$	.895	Borodin. Ber. 5, 480.
"	"	.900	
of oenanthol	$C_{28}H_{50}O$	.8831, 15°	Perkin. Ber. 15, 2805.
"	"	.8751, 80°	
"	"	.8728, 85°	
leryl"	$C_7H_{12}O_2$	.8804, 15°.5	Olewinsky. J. 14, 463.
alcohol	$C_8H_{12}O_2$	.9306, 25°	Heintz. A. C. P. 178, 349.
nethyl ethyl	$C_7H_{14}O_2$	.855, 20°	James. J. C. S. 49, 50.
l diethyl ace-	$C_9H_{16}O_3$	.886, 15°	" "
ylacetone	$C_{20}H_{34}O_2$	.934, 12°	Geuther. J.P.C. (2), 6, 160.
tone carbonate	$C_{10}H_{18}O_3$	.9738, 20°	Frankland and Duppa. J. 18, 306.
de	$C_6H_{10}O$	.848, 23°	Fittig. J. 12, 344.
	"	.8528, 19°	Gladstone. Bei. 9, 249.
	"	.8578, 20°	Brühl. A. C. P. 235, 1.
	"	.8547, 15°.4	Schramm. Ber. 16, 1581.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Amyl propargyl oxide	$C_5H_{11}.C_3H_3.O$	.84, 12°	Henry. B. S. C. 1 282.
Diallylcarbyl methyl oxide.	$C_7H_{11}.CH_3.O$	.8258, 0°	Rjabinin. Ber. 1 2874.
" " "	"	.8096, 20°	
Diallylcarbyl ethyl oxide	$C_7H_{11}.C_2H_5.O$	.8218, 0°	" "
" " "	"	.8023, 20°	
Isopropylallyldimethylcarbyl methyl oxide.	$C_9H_{17}.CH_3.O$	.8027, 4°	Kononowitsch. Be 18, ref. 105.
Allyl formate	$C_4H_6O_2$	.9322, 17°.5	Tollens, Weber, an Kempf. J. 21, 450.
Allyl acetate	$C_5H_8O_2$	.8220, 103°	Schiff. G. C. I. 13, 177.
" "	"	.9276, 20°	Brühl. Bei. 4, 780.
" "	"	.9258, 24°.5	Gladstone. Bei. 9, 249.
Ethylvinyl acetate	$C_6H_{10}O_2$	.896, 0°	Nevolé. J. C. S. 32, 868.
" "	"	.892, 0°	Lieben. J. C. S. 32, 868.
Methylisocrotyl acetate	$C_8H_{14}O_2$	.912	Wurtz. J. 17, 514.
Allyldimethylcarbyl acetate.	"	.9007, 0°	M. and A. Saytzeff. A. C. P. 185, 151.
" "	"	.8832, 18°.5	
Allyldipropylcarbyl acetate.	$C_{12}H_{22}O_2$	.8908, 0°	Saytzeff. Ber. 11, 1989.
" "	"	.8783, 21°	
Propargyl acetate	$C_5H_6O_2$	1.0031, 12°	Henry. J. C. S. (2), 11, 1128.
" "	"	1.0052, 20°	Brühl. Bei. 4, 780.
Diallylcarbyl acetate	$C_9H_{14}O_2$	.9167, 0°	M. Saytzeff. A. C. P. 185, 129.
" "	"	.8997, 17°.5	
Diallylmethylcarbyl acetate.	$C_{10}H_{16}O_2$	.8997, 0°	Sorokin. A. C. P. 185, 169.
" "	"	.8733, 21°	
Allylacetic acid	$C_5H_8O_2$	.98656, 12°	Perkin. J. C. S. 49, 205.
" "	"	.98416, 15°	
" "	"	.97670, 25°	
Ethyl allylacetate	$C_7H_{12}O_2$	.9222, 0°	Wurtz. J. 21, 446.
Allyloctylic acid	$C_{11}H_{20}O_2$	.91020, 25°	Perkin. J. C. S. 49, 205.
" "	"	.89930, 45°	
Ethyl allyloctylate	$C_{13}H_{24}O_2$	.88271, 15°	" "
" "	"	.87658, 25°	
Diallylacetic acid	$C_8H_{12}O_2$	.9495, 25°	Wolff. Ber. 10, 1957.
" "	"	.9578, 13°	Reboul. J. C. S. 32, 594.
" "	"	.95756, 12°	Perkin. J. C. S. 49 205.
" "	"	.95547, 15°	
" "	"	.94913, 25°	
Ethyl methoxyldiallylacetate.	$C_{11}H_{18}O_3$	.96066, 20°	Barataeff. J. P. C (2), 35, 2.
Allyl acetacetate	$C_7H_{10}O_3$	.99272, 15°	Perkin. J. P. C (2), 32, 523.
" "	"	.98542, 25°	
Ethyl allylacetacetate	$C_9H_{14}O_3$	.9938, 18°.5	Gladstone. Bei. 9 249.
" "	"	.982, 20°	Zeidler. B. S. C. 2 73.
Ethyl diallylacetacetate	$C_{12}H_{18}O_3$	.948, 25°	Wolff. Ber. 10, 195
Ethyl diallyloxyacetate	$C_{10}H_{15}O_3$	.9873, 0°	Saytzeff. Ber. 9, 7
" "	"	.9718, 18°	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Allyl oxalate	$C_8 H_{10} O_4$	1.055, 15°.5	Hofmann and Cahours. J. 9, 585.
Ethyl allylmalonate	$C_{10} H_{16} O_4$	1.018, 16°	Conrad and Bischoff. Ber. 13, 595.
" "	"	1.01475, 14°	Gladstone. Bei. 9, 249.
" "	"	1.01397, 15°	Perkin. J. P. C. (2), 32, 523.
" "	"	1.00620, 25°	
Ethyl diallylmalonate	$C_{13} H_{20} O_4$	.996, 14°	Conrad and Bischoff. Ber. 13, 595.
" "	"	.99328, 20°	Matwejeff. Ber. 21, 181.
" "	"	1.00620, 6°.5	Perkin. J. C. S. 49, 205.
" "	"	.99940, 15°	
" "	"	.99252, 25°	
Diallylmethylcarbin oxide.	$C_6 H_{12} O_2$	1.0099, 21°	Kablukow. Ber. 21, ref. 54.
Diallylmethyl pinakone	$C_{12} H_{22} O_2$	.9632, 0°	Kablukow. Ber. 21, ref. 55.
" "	"	.9452, 24°	
Derivative of tetrabromdiallylcarbin acetate.	$C_{13} H_{20} O_7$	1.18013, 0°	Dieff. J. P. C. (2), 35, 20.

19th. Erythrite, Mannite, and the Carbohydrates.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Erythrite or erythrol	$C_4 H_6 (O H)_4$	1.590	Lamy. J. 5, 676.
" "	"	1.449, 4°	Schröder. Ber. 12, 1561.
" "	"	1.452, 4°	
Anhydride of erythrol	$C_4 H_6 O_2$	1.1323, 0°	Przybytek. Ber. 17, 1091.
" "	"	1.1132, 18°	
Mannite or mannitol	$C_6 H_8 (O H)_6$	1.521	Prunier. Ann. (5), 15, 22.
" "	"	1.485, 4°	Schröder. Ber. 12, 1561.
" "	"	1.486, 4°	
" "	"	1.489, 4°	
Dulcite or dulcitol	"	1.466, 15°	Eichler. J. 9, 665.
Sorbite	$(C_6 H_{14} O_6)_2 . H_2 O$	1.654, 15°	Pelouze. J. 5, 655.
Pinite	$C_6 H_{12} O_5$	1.520	Berthelot. J. 8, 675.
Quercite	"	1.5845	Prunier. Bei. 2, 68.
Cane sugar, or saccharose	$C_{12} H_{22} O_{11}$	1.606	Brisson. P. des C.
" " "	"	1.600	Schübler and Renz.
" " "	"	1.593	Filhol.
" " "	"	1.596	Playfair and Joule. M. C. S. 2, 401.
" " "	"	1.5578	Brix. J. 7, 618.
" " "	"	1.63	Dubrunfaut.
" " "	"	1.5951, 15°	Maumené. B. S. C. 22, 33.
" " "	"	1.588, 4°	Schröder. Ber. 12, 561.
" " "	"	1.589	W. C. Smith. Am. J. P. 53, 148.

Name.	Formula.	Sp. Gravity.	Autho
Cane sugar, or saccharose	$C_{12}H_{22}O_{11}$	1.58046, 17°.5	Gerlach.
" " " Fused, vitreous.	"	1.996, 14°.5	Morin. J. 28, 34.
" " " Molten	"	1.6	Quincke. 141.
" " "	"	1.5984	Wiedem Lödeb (2), 2
" " " Barley sugar.	"	1.5122	
" " "	"	1.5928	Zehnder. 29, 260.
Milk sugar, or lactose	"	1.534	Filhol.
" " "	"	1.53398, 4°	Playfair J. C. S.
" " "	"	1.525, 4°	Schröder. 561.
" " "	"	1.588	W. C. Sm J. P. 5
Melezitose	$C_{12}H_{22}O_{11}.H_2O$	1.540, 17°.5	Alekhine. 684.
Glucose	$C_6H_{12}O_6.H_2O$	1.3861	Payen an
"	"	1.391	
"	"	1.54 } 11°	Bödeker.
"	"	1.57	
" Fused	"	1.8	Quincke. 141.
Inosite. Anhydrous	$C_6H_{12}O_6$	1.752	Tanret a Ann. (
"	$C_6H_{12}O_6.2H_2O$	1.1154, 5°	Vohl. J
"	"	1.535, 8°	Tanret a C. R. 8
"	"	1.524, 15°	
Bergenite	$C_8H_{10}O_5.H_2O$	1.5445	Morelli. 2694.
Starch	$(C_6H_{10}O_5)_n$	1.505	Payen.
"	"	1.530	Dietrich. 51.
"	"	1.56	Kopp. 38.
" Arrowroot	"	1.5045, air dried	Flückig 10, 44
" Potato	"	1.5029, "	
" "	"	1.6330, dried at 100°.	
Dextrin	"	1.03848	O'Sulliva 880.
Inulin	"	1.470	Dragendo 748.
"	"	1.462	Dubrunf
"	"	1.3491	Kiliani. 205, 15
Cellulose	"	1.525	Weltzien menste
Gum	"	1.487, air dried	Flückig 10, 4
"	"	1.525, dried at 100°.	
" Gum-arabic	"	1.355	Guérin-V
" " tragacanth	"	1.384	
" Senegal	"	1.436	
" Bassora	"	1.359	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Graminin	$6 C_6 H_{10} O_5 . H_2 O$	1.522, 12°	Ekstrand and Johanson. Ber. 21, 594.
Phlein	"	1.480	
Octaceto-diglucose	$C_{12} H_{14} (C_2 H_3 O_2)_8 O_{11}$	1.27, 16°	Demole. Ber. 12, 1936.
Octaceto-saccharose	"	1.27, 16°	" "

20th. Miscellaneous Non-Aromatic Compounds.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Acetopropyl alcohol	$C_5 H_{10} O_2$	1.00514, 15°	Perkin, Jr. J. C. S. 51, 830.
" "	"	1.00197, 20°	
" "	"	.99896, 25°	
Acetobutyl alcohol	$C_6 H_{12} O_2$	1.0143, 0°	Lipp. Ber. 18, 3281.
" "	"	.99771, 4°	Perkin, Jr. J. C. S. 51, 719.
" "	"	.98947, 15°	
" "	"	.98270, 25°	
Methyl orthoformate	$C_4 H_{10} O_3$	.974, 23°	Deutsch. Ber. 12, 115.
Ethyl orthoformate	$C_7 H_{16} O_3$	.8964	Williamson
Propyl orthoformate	$C_{10} H_{22} O_3$	.879, 23°	Deutsch. Ber. 12, 115.
Isobutyl orthoformate	$C_{13} H_{28} O_3$	.861	" "
Isamyl orthoformate	$C_{16} H_{34} O_3$	.864	" "
Diethoxyl ether	$C_8 H_{18} O_3$	.8924, 21°	Lieben. J. 20, 546.
Derivative of isobutylaldehyde.	$C_8 H_{14} O$	.9575, 0°	Oeconomides. Ber. 14, 2581.
" "	$C_{10} H_{20} O_2$	.9415, 0°	" "
Derivative of valeral	$C_{10} H_{18} O$	.9027, 17°	Borodin. J. 17, 339.
" "	$C_{20} H_{38} O_3$	.895	Borodin. Ber. 5, 480.
" "	"	.900	
Derivative of oenanthol	$C_{28} H_{50} O$	.8831, 15°	Perkin. Ber. 15, 2805.
" "	"	.8751, 30°	
" "	"	.8723, 35°	
"Acetyl valeryl"	$C_7 H_{12} O_2$	.8804, 15°.5	Olewinsky. J. 14, 463.
Diacetone alcohol	$C_6 H_{12} O_2$	.9306, 25°	Heintz. A. C. P. 178, 349.
Methoxylmethyl ethyl acetone.	$C_7 H_{14} O_2$	.855, 20°	James. J. C. S. 49, 50.
Dimethoxyl diethyl acetone.	$C_9 H_{18} O_3$	.886, 15°	" "
From diethylacetone	$C_{20} H_{34} O_2$	.934, 12°	Geuther. J.P.C. (2), 6, 160.
Ethyl diacetone carbonate	$C_{10} H_{18} O_3$	.9738, 20°	Frankland and Duppa. J. 18, 306.
Mesityl oxide	$C_6 H_{10} O$	.848, 23°	Fittig. J. 12, 344.
" "	"	.8528, 19°	Gladstone. Bei. 9, 249.
" "	"	.8578, 20°	Brühl. A. C. P. 235, 1.
Homologue of mesityl oxide.	$C_8 H_{14} O$	.8547, 15°.4	Schramm. Ber. 16, 1581.

Name.	Formula.	Sp. Gravity.	Author
Phorone	$C_9H_{14}O$	.932 } 12°	Fittig. J.
"	"	.939 } 12°	
"	"	.9614, 20°	Schwanert.
"	"	.9645, 15°	Schulze. Be
"	"	.885, 20°	Brühl. 235, 1.
"	"	.8793, 27°	
"	"	.8785, 28°	
"	"	.8776, 29°	
Aldol	$C_4H_8O_2$	1.1208, 0°	Wurtz. B. 436.
"	"	1.1094, 16°	
"	"	1.0819, 49°.6	
Derivative of aldol	$C_8H_{16}O_4$	1.0941 } 0°	Wurtz. (1526.
" "	"	1.0951 } 0°	
" "	"	1.0953 } 0°	
Diacetate from the above compound.	$C_{12}H_{20}O_6$	1.095, 0°	"
Derivative of laevulinic ether.	$C_{14}H_{22}O_7$	1.097, 15°	Conrad an zeit. Ber
Diethyl glycollic ether	$C_{20}H_{36}O_{10}$	1.01, 19°	Geuther. J
Propidene acetic acid	$C_5H_8O_2$	.9922, 15°	Komnenos. 218, 167.
Acetyl trimethylene	C_5H_8O	.90471, 15°	Perkin, Jr. 51, 832.
" "	"	.90083, 20°	
" "	"	.89706, 25°	
Ethyl acetyltrimethylene-carboxylate.	$C_8H_{12}O_3$	1.08436, 4°	Perkin, Jr. 47, 801.
" "	"	1.08256, 6°.5	
" "	"	1.02549, 15°	
" "	"	1.01834, 25°	
" "	"	1.0425, 25°.2	Gladstone. 2563.
" "	"	1.05174 } 15°	Two prep Perkin, S. 51, 8
" "	"	1.05152 } 15°	
" "	"	1.04810, 20°	
" "	"	1.04390, 25°	
" "	"	1.04703 } 15°	
" "	"	1.04753 } 15°	
" "	"	1.03930, 25°	
Ethyl trimethylenedicarboxylate.	$C_9H_{14}O_4$	1.0708, 7°	Gladstone. 51, 852.
" "	"	1.06455, 15°	Perkin. J. 852.
" "	"	1.05657, 25°	
" "	"	1.06463, 15°	Perkin, Jr. 47, 801.
" "	"	1.05664, 25°	
Ethyl trimethylenetricarboxylate.	$C_{12}H_{18}O_6$	1.127, 15°	Conrad an zeit. Ber.
Tetramethylenemonocarboxylic acid.	$C_5H_8O_2$	1.05480, 15°	Perkin. J.C
"	"	1.05116, 20°	
"	"	1.04761, 25°	
Ethyl tetramethylenedicarboxylate.	$C_{10}H_{16}O_4$	1.0484, 14°	Gladstone. 249.
" "	"	1.05328, 9°	Perkin. J.C
" "	"	1.04817, 15°	
" "	"	1.04051, 25°	
Ethyl acetyltetramethylenecarboxylate.	$C_9H_{14}O_3$	1.0668, 18°	Gladstone. 249.
Methylpentamethylenemonocarboxylic acid.	$C_7H_{12}O_2$	1.02054, 15°	[illegible]
"	"	1.01[illegible]	
"	"	1.01[illegible]	

Name.	Formula.	Sp. Gravity.	Authority.
›entamethylene-carboxylic acid.	$C_7H_{12}O_2$	1.0256, 4°	Two lots. Perkin. J. C. S. 53, 195 and 199.
"	"	1.0208, 10°	
"	"	1.0172, 15°	
"	"	1.0139, 20°	
"	"	1.0109, 25°	
›entamethylene ·l ketone.	$C_8H_{14}O$	.9222, 4°	Perkin. J. C. S. 53, 200.
"	"	.9174, 10°	
"	"	.9136, 15°	
"	"	.9100, 20°	
"	"	.9070, 25°	
ıexamethylene-carboxylic acid.	$C_8H_{14}O_2$	1.0079, 4°	Perkin. J. C. S. 53, 209.
"	"	1.0033, 10°	
"	"	.99982, 15°	
"	"	.9966, 20°	
"	"	.9940, 25°	
lehydrohexone	$C_8H_{10}O$	.92272, 4°	Perkin. J. C. S. 51, 719.
"	"	.91278, 15°	
"	"	.90502, 25°	
methyldehydro-ıecarboxylate.	$C_9H_{14}O_3$	1.06457, 15°	Three lots. Perkin. J. C. S. 51, 711 and 713.
"	"	1.05840, 25°	
"	"	1.06840, 15°	
"	"	1.06470, 20°	
"	"	1.06187, 25°	
"	"	1.0744, 9°	
"	"	1.0696, 15°	
"	"	1.0660, 20°	
"	"	1.0626, 25°	
ıethenyltricarbox-	$C_{10}H_{16}O_6$	1.10, 19°	Conrad. Ber. 12, 1236.
›thenyltricarboxy-	$C_{11}H_{18}O_6$	1.089, 17°	Bischoff. A. C. P. 214, 39.
diethyl-β-methyl-ıyltricarboxylate.	"	1.079, 15°	Bischoff. A. C. P. 214, 56.
β-methylethenyl-boxylate.	$C_{12}H_{20}O_6$	1.092, 16°	Bischoff. Ber. 18, 2165.
α β-dimethylethe-icarboxylate.	$C_{13}H_{22}O_6$	1.0745, 15°	Bischoff and Rach. A. C. P. 234, 54.
›utenyltricarboxy-	"	1.065, 17°	Polko. A. C. P. 242, 113.
isobutenyltricar-late.	"	1.064, 17°	Barnstein. A. C. P. 242, 126.
"	"	1.0805, 18°	Levy and Engländer. A. C. P. 242, 210.
propylethenyltri-›xylate.	$C_{14}H_{24}O_6$	1.052, 18°	Waltz. A. C. P. 214, 58.
ı dicarboxylgluta-ıte.	$C_{15}H_{22}O_8$	1.181, 15°	Conrad and Guthzeit. Ber. 15, 2842.
l isoallylenetetra-›xylate.	$C_{15}H_{24}O_8$	1.102, 15°	Bischoff. Ber. 18, 2164.
dimethylacetylene-carboxylate.	$C_{16}H_{26}O_8$	1.114, 15°	Bischoff and Rach. A. C. P. 234, 54.
…openylcarbi-	$C_5H_{10}O$	.8571, 0°	Kondakoff. Ber. 18, ref. 660.
"	"	.8419, 20°.5	
	$C_5H_8O_2$	1.053, 11°	Henry. B. S. C. 19, 219.
	$C_6H_{10}O_2$	.92, 18°	Henry. Ber. 14, 2272.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY
Parasorbic acid	$C_6H_8O_2$	1.068, 15°	Hofmann. J. 12, 322.
Derivative of mannite	C_6H_8O	.9896, 0°	Fauconnier. J 48, 742.
Methyl mucate	$C_8H_{14}O_8$	1.48 } 20°	Malaguti. A 68, 86.
" "	"	1.50 } 20°	
Ethyl mucate	$C_{10}H_{18}O_8$	1.17 } 20°	"
" "	"	1.32 } 20°	
Valerylene diacetate	$C_9H_{16}O_4$	.963	Guthrie and J. 12, 365.
Conylene diacetate	$C_{12}H_{20}O_4$	.988, 18°.2	Wertheim. 433.
Amenyl valerone	$C_{14}H_{26}O$	.836, 7°	Geuther, Fr and Loos. I 1856.
Linoleic acid	$C_{16}H_{28}O_2$	.9206, 14°	Schüler. J. 1
Ricinoleic acid	$C_{18}H_{34}O_3$	.940, 15°	Saalmüller. 562.
" "	"	.9502, 15°	Norton and Ri son. A. C. 57.
Distillate from linoleic acid.	$C_{20}H_{30}O_2$	.9108, 15°	"
Distillate from ricinoleic acid.	"	.912	"
Furfurane	C_4H_4O	.9644, 0°	Henninger. (6), 7, 209.
"	"	.9444, 15°	
Dihydrofurfurane	C_4H_6O	.9668 } 0°	"
"	"	.9684 } 0°	
"	"	.9508, 15°	
Erythrol. (Crotonylene glycol).	$C_4H_8O_2$	1.06165, 0°	"
"	"	1.04653, 20°	
Furfurol	$C_5H_4O_2$	1.1648, 15°.6	Stenhouse. J.
"	"	1.1636, 18°.5	Stenhouse. J.
"	"	1.168, 15°.5	Fownes. P. T 253.
"	"	1.134 } 15°	Völckel. J.
"	"	1.150 } 15°	
"	"	1.1006, 27°	Stenhouse. (3), 18, 124.
"	"	.9310, 162°	Ramsay. J. 35, 463.
"	"	1.0025 } 160°.5 bp.	Schiff. G. 13, 177.
"	"	1.0026 } 160°.5 bp.	
"	"	1.1344, 19°	Gladstone. I 249.
"	"	1.1594, 20°	Brühl. A. 235, 1.
Ethylfurfurcarbinol	$C_7H_{10}O_2$	1.066, 0°	Pawlinoff and ner. Ber. 17
"	"	1.053, 15°.5	
Furfurbutylene	$C_8H_{10}O$	.9509, 14°.5	Toennies and Ber. 17, 8
Fucusol	$C_5H_4O_2$	1.150, 13°.5	Stenhouse. J.
Ethyl pyromucate	$C_7H_8O_3$	1.297, 20°	Malaguti. J. 41, 294.
Triethylpropylphycite	$C_9H_{20}O_4$	.976, 0°	Wolff. A. 150, 56.
"	"	.96051, 16°.5	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
n petroleum ----	$C_{11} H_{20} O_2$ ----------	.982, 0° ----	Hell and Medinger. Ber. 7, 1218.
" ----	" ----------	.969, 23° ---	
her of the above	$C_{13} H_{24} O_2$ ----------	.939, 0° --	" "
" " acid.	" ----------	.919, 27° --	
ichlorhydrin and carbonic ether.	$C_6 H_{10} O_3$ ----------	.9931, 21°.5---	Kelly. Ber. 11, 2226.

21st. Phenols.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
l ----------------	$C_6 H_5 . O H$ ---------	1.062, 20° ----	Runge. P.A. 32, 308.
----------------	" ---------	1.065, 18° ----	Laurent. Ann. (3), 3, 195.
----------------	" ---------	1.0627 -------	Scrugham. J. C. S. 7, 237.
----------------	" ---------	1.0808, 0°, l.	Kopp. A. C. P. 95, 307.
----------------	" ---------	1.0597, 32°.9	
----------------	" ---------	1.0554 -------	Duclos. A.C.P. 109, 135.
----------------	" ---------	1.068 --------	Church. J. C. S. 16, 76.
----------------	" ---------	1.0667, 38° ---	Graebe.
----------------	" ---------	1.0709, 38° ---	Zotta. A. C. P. 174, 87.
----------------	" ---------	1.066, cryst. --	Hamberg. Ber. 4, 751.
----------------	" ---------	1.05433, 40° --	Adrieenz. Ber. 6, 443.
----------------	" ---------	1.04663, 50° --	
----------------	" ---------	1.03804, 60° --	
----------------	" ---------	1.02890, 70° --	
----------------	" ---------	1.01950, 80° --	
----------------	" ---------	1.01015, 90° --	
----------------	" ---------	1.00116, 100°	
----------------	" ---------	1.0558, 46°	From four different sources. Ladenburg. Ber. 7, 1687.
----------------	" ---------	1.0463, 56°	
----------------	" ---------	1.0567, 46°	
----------------	" ---------	1.0470, 56°	
----------------	" ---------	1.0560, 46°	
----------------	" ---------	1.0467, 56°	
----------------	" ---------	1.0559, 46°	
----------------	" ---------	1.0476, 56°	
----------------	" ---------	.8789, 186° ---	Ramsay. J. C. S. 35, 463.
----------------	" ---------	1.0591, 40°	Bedson and Williams. Ber. 14, 2551.
----------------	" ---------	1.0545, 45°	
----------------	" ---------	1.0722, 20° ---	Landolt. P. A. 122, 558.
----------------	" ---------	1.0702, 20° ---	Brühl. Bei. 4, 782.
----------------	" ---------	1.05810, 4° ---	Flink. Bei. 8, 262.
----------------	" ---------	1.0598, 21° ---	Gladstone. Bei. 9, 249.

NAME.	FORMULA.	SP. GRAVITY.	AUTH
Phenol	$C_6 H_5 . O H$	1.0906, 0°, l.	Pinette.
"	"	1.0887, 15°.5	248, 2
"	"	.9217, 182°.9	
Diphenol. Pyrocatechin	$C_6 H_4 (O H)_2$. 1.2	1.340 } 4°	Schröde
" "	"	1.348	561.
" Resorcin	" 1.3	1.2728, 0°	Caldero
" "	"	1.2717, 15°	818.
" "	"	1.276 } 4°	Schröde
" "	"	1.289	561.
" "	"	1.1795, 100°.2	Schiff. 247.
" Hydroquinone	" 1.4	1.324 } 4°	Schröde
" "	"	1.328	561.
Triphenol. Pyrogallol	$C_6 H_3 . (O H)_3$	1.443 } 4°	"
" "	"	1.463	
Orthokresol	$C_6 H_4 . C H_3 . O H$	1.089, 28°	Gladsto 249.
"	"	1.0578, 0°, l.	Pinette.
"	"	1.0058, 65°.6	248, 2
"	"	.8867, 190°.8	
Metakresol	"	1.0880, 19°	Gladsto 249.
"	"	1.0498, 0°	Pinette.
"	"	.8744, 202°.8	248, 2
Parakresol. ?	"	1.083, 28°	v. Rad.
"	"	1.0522, 0°, l.	Pinette.
"	"	.9962, 65°.6	248, 2
"	"	.8728, 201°.8	
Ethylphenol	$C_6 H_4 . C_2 H_5 . O H$	1.049, 14°	Auer.
Orthopropylphenol	$C_6 H_4 . C_3 H_7 . O H$	1.015, 0°	Spica.
"	"	.9370, 100°	
Parapropylphenol	"	1.0091, 0°	"
"	"	.9324, 100°	
Orthoisopropylphenol	"	1.01243, 0°	Fileti. 118.
"	"	.92765, 100°	
Xylenol. 1.3.4	$C_6 H_3 . C H_3 . C H_3 . O H$	1.036, 0°	Wurtz.
" "	"	.9700, 81°	
" "	"	1.0362, 0°	Jacobse 24.
" ?	"	1.0233, 23°	Wroble 459.
" ?	"	.9709, 81°	Wurtz.
" 1.3. ?	"	1.0366, 0°	Lako.
"	"	1.0242, 15°.5	
"	"	1.0129, 30°	
"	"	1.0020, 45°	
"	"	.9903, 59°	
"	"	.9673, 100°	
Phloretol	$C_8 H_{10} O$	1.0374, 12°	Hlasiwet
Isopropylkresol	$C_6 H_3 . C_3 H_7 . C H_3 . O H$	1.00122, 0°	Spica. 460.
"	"	.91971, 100°	
Propylkresol. Carvacrol	"	.98558, 15°	Jacobsen 1060.
" "	"	.981, 15°	Jahns.
" Thymol	"	1.0285, s.	Stenhous
" "	"	1.01068, 0°	Two p
" "	"	1.009136, 0°	Pisati
" "	"	.92424, 100°	

NAME.	FORMULA.	SP. GRAVITY	AUTHORITY.
Isopropylkresol. Thymol	$C_6H_3.C_3H_7.CH_3.OH$	1.069	Rüdorff. Ber.12,252.
" "	"	1.0101, 4°	Schiff. Ber. 13,1408.
" "	"	.939, 25°.5	Haines. J. 9, 623.
" "	"	.988, 0°	Febve. Ber.14,1720.
" "	"	1.029	Schröder. Ber. 14, 2516.
" "	"	1.034	
" "	"	.96895, 24°.4	Nasini and Bernheimer. G.C.I.15,50.
" "	"	.92838, 77°.3	
" "	"	.9499, 49°.8	Schiff. A.C.P.223, 247.
" "	"	.9941, 0°, l.	Pinette. A. C. P. 243, 82.
" "	"	.9401, 16°.5	
" "	"	.7923, 281°.8	
Orthobutenylphenol	$C_6H_4.C_4H_7.OH$	1.0171	Perkin. C.N.39,39.
Guaiacol. 1.2	$C_6H_4.OCH_3.OH$	1.1171, 18°	Hlasiwetz. A.C.P. 106, 366.
"	"	1.119, 22°	Sobrero.
"	"	1.125, 16°	Völckel. J. 7, 610.
"	"	1.119, 17°.5	Gorup-Besanez.
Kreosol. 1.3.4	$C_6H_3.OCH_3.CH_3.OH$	1.0894, 18°	Hlasiwetz. A.C.P. 106, 354.
Orcin	$C_6H_3.CH_3.(OH)_2.H_2O$	1.283, 4°	Schröder. Ber. 12, 1611.
"	"	1.296, 4°	

22d. Aromatic Alcohols.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Benzyl alcohol	$C_6H_5.CH_2OH$	1.059	Cannizzaro. J. 7, 585.
" "	"	1.0628, 0°	Kopp. A.C.P.94, 257.
" "	"	1.0507, 15°.4	
" "	"	1.0465, 19°	Kraut. A. C. P. 152, 134.
" "	"	1.0429, 20°	Brühl. Bei. 4, 781.
" "	"	1.0412, 22°	Gladstone. Bei. 9, 249.
Benzylcarbinol	$C_6H_5.CH_2.CH_2OH$	1.0337, 21°	Radziszewski. Ber. 9, 373.
Phenylpropyl alcohol	$C_6H_5.CH_2.CH_2.CH_2OH$	1.008, 18°	Rügheimer. A. C. P. 172, 126.
" "	"	1.0079, 20°	Brühl. Bei. 4, 781.
Orthoxylyl alcohol	$C_6H_4.CH_3.CH_2OH$	1.08, s.	Colson. Ann. (6), 6, 86.
" "	"	1.023, 40°, l.	
Metaxylyl alcohol	"	.9157, 17°	Radziszewski and Wispek. Ber. 15, 1747.
" "	"	1.036, 0°	Colson. Ann. (6), 6, 86.
[illegible]phenylcarbinol	$C_6H_4.CHOH.CH_3$	1.016, 0°	Wagner. Ber. 17, ref. 817.
"	" CH_3	.994, 23°	
[illegible]ol. 1.4	$C_6H_4.C_3H_7.CH_2OH$	.9775, 15°	Kraut. A. C. P. 192, 224.

Name.	Formula.	Sp. Gravity.	Authori
Saligenin	$C_6H_4.OH.CH_2OH$	1.1618, 25°	Beilstein and heim. J. 1
Methylsaligenin. 1.2	$C_6H_4.OCH_3.CH_2OH$	1.1200, 28°	Cannizzar Koerner. C. 18, 182
" "	"	1.0582, 100°	
Anisic alcohol. 1.4	"	1.1093, 26°	"
" "	"	1.0507, 100°	
Acetophenone alcohol	$C_8H_8O_2$	1.018	Emmerling an gler. Ber. 6
Cinnamic alcohol	$C_9H_{10}O$	1.0402, 24°.8	Nasini. Bei.
" "	"	1.04017, 24°.8	Nasini and heimer. 6 15, 60.
" "	"	1.03024, 86°.1	
" "	"	1.0027, 77°.8	
" "	"	1.0318, 13°	Gladstone. 1 249.
" "	"	1.0440, 20°	Brühl. A. 235, 1.
" "	"	1.0354, 31°	
" "	"	1.0346, 32°	
" "	"	1.0338, 33°	
Ethylphenylacetylene alcohol.	$C_{10}H_{12}O$	.985, 19°	Morgan. J. (3), 1, 162.
Orthoxylene glycol	$C_8H_8(OH_2OH)_2$	1.138, 75°	Colson. An 6, 86.
Metaxylene glycol	"	1.161, 18°, surfused.	"
" "	"	1.135, 58°	
Paraxylene glycol	"	1.094, 125°	"
Mesitylene glycol	$C_6H_3.CH_3.(CH_2OH)_2$	1.22, 15°	Robinet and C. R. 96, 1

23d. Aromatic Oxides.

Name.	Formula.	Sp. Gravity.	Authori
Phenyl ether	$C_6H_5.O.C_6H_5$	1.0[illegible]4	Gladstone and J. C. S. 41,
" "	"	1.0744, 24°	Gladstone. 1 249.
" "	"	1.0712, 25°	
Phenyl methyl oxide. Anisol	$C_6H_5.O.CH_3$	.991, 15°	Cahours. J.
" " " "	"	[illegible]	Schiff. G. C 177.
" " " "	"	[illegible], 155°	
" " " "		[illegible], 2[illegible].5	Nasini and heimer. 6 15, 50.
" " " "		[illegible]	Pinette. A.C 22
" " " "		[illegible], 15[illegible].3	
[illegible]	$C_6H_5.O.C_2H_5$	[illegible]	Schiff. G. 6 177.
[illegible]		[illegible]	
[illegible]		[illegible]	[illegible]

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Phenyl ethyl oxide. Phenetol.	$C_6 H_5. O. C_2 H_5$	.9822, 0°	Pinette. A.C.P. 243, 32.
" " " "	"	.8169, 170°.3	
Phenyl propyl oxide	$C_6 H_5. O. C_3 H_7$	.968, 20°	Cahours. Les Mondes, 32, 280.
" " "	"	.9639, 0°	Pinette. A.C.P. 243, 32.
" " "	"	.7889, 190°.5	
Phenyl isopropyl oxide	"	.958, 0°	Silva. Z. C. 13, 250.
" " "	"	.947, 12°.5	
Phenyl butyl oxide	$C_6 H_5. O. C_4 H_9$	.9500, 0°	Pinette. A.C.P. 243, 32.
" " "	"	.7664, 210°.3	
Phenyl isobutyl oxide	"	.9388, 16°	Riess. J. C. S. 24, 221.
Phenyl n. heptyl oxide	$C_6 H_5. O. C_7 H_{15}$	.9319, 0°	Pinette. A.C.P. 243, 32.
" " "	"	.7075, 266°.8	
Phenyl n. octyl oxide	$C_6 H_5. O. C_8 H_{17}$	.9221, 0°	" "
" " "	"	.6941, 282°.8	
Benzyl ether	$C_7 H_7. O. C_7 H_7$	1.0359, 16°	Lowe. J. C. S. 51, 701.
Kresyl ether	"	1.0352, 16°	Gladstone. Bei. 9, 249.
Orthokresyl methyl oxide	$C_7 H_7. O. C H_3$	.9957, 0°	Pinette. A. C. P. 243, 32.
" " "	"	.8331, 171°.3	
Metakresyl methyl oxide	"	.9891, 0°	" "
" " "	"	.8255, 177°.2	
Parakresyl methyl oxide	"	.8236, 175°.5	Schiff. Bei. 9, 559.
" " "	"	.9868, 0°	Pinette. A. C. P. 243, 32.
" " "	"	.8241, 175°	
Orthokresyl ethyl oxide	$C_7 H_7. O. C_2 H_5$	.9679, 0°	" "
" " "	"	.7941, 184°.8	
Metakresyl ethyl oxide	"	.97123, 5°	Staedel. Ber. 14, 898.
" " "	"	.9650, 0°	Pinette. A. C. P. 243, 32.
" " "	"	.7888, 192°	
Parakresyl ethyl oxide	"	.8744, 0°	Fuchs. J. 22, 457.
" " "	"	.9662, 0°	Pinette. A. C. P. 243, 32.
" " "	"	.7884, 189°.9	
Orthokresyl propyl oxide	$C_7 H_7. O. C_3 H_7$	.9517, 0°	" "
" " "	"	.7675, 204°.1	
Metakresyl propyl oxide	"	.9484, 0°	" "
" " "	"	.7628, 210°.6	
Parakresyl propyl oxide	"	.9497, 0°	" "
" " "	"	.7635, 210°.4	
Orthokresyl butyl oxide	$C_7 H_7. O. C_4 H_9$	.9437, 0°	" "
" " "	"	.7493, 223°	
Metakresyl butyl oxide	"	.9407, 0°	" "
" " "	"	.7422, 229°.2	
Parakresyl butyl oxide	"	.9419, 0°	" "
" " "	"	.7410, 229°.5	
Orthokresyl n. heptyl oxide	$C_7 H_7. O. C_7 H_{15}$	.9243, 0°	" "
" " "	"	.7016, 277°.5	
Metakresyl n. heptyl oxide	"	.9202, 0°	" "
" " "	"	.6927, 283°.2	
Parakresyl n. heptyl oxide	"	.9228, 0°	" "
" " "	"	.6905, 283°.3	
Orthokresyl n. octyl oxide	$C_7 H_7. O. C_8 H_{17}$	.9231, 0°	" "
" " "	"	.6905, 292°.9	
Metakresyl n. octyl oxide	"	.9194, 0°	" "
" " "	"	.6818, 298°.9	

Name.	Formula.	Sp. Gravity.	Authori
Parakresyl n. octyl oxide	$C_7H_7.O.C_8H_{17}$	.9199, 0°	Pinette. A.
" " "	"	.6808, 298°	248, 32.
Ethyl phenetol	$C_6H_4.C_2H_5.O.C_2H_5$	.986, 14°	Auer. Ber. 1
Phloryl ethyl oxide	$C_8H_9.O.C_2H_5$	.9328, 18°	Sigel. A.C.] 345.
Styrolyl ethyl oxide	"	.931, 21°.9	Thorpe. J. 2
Orthopropylphenyl methyl oxide.	$C_6H_4.C_3H_7.O.CH_3$	.9694, 0°	Spica. Ber. 1
"	"	.9168, 100°	
Parapropylphenyl methyl	"	.9636, 0°	"
oxide. " "	"	.9125, 100°	
Isopropylphenyl methyl oxide.	"	.962, 0°	Paterno and Ber. 10, 84.
Isopropylphenyl ethyl oxide.	$C_6H_4.C_3H_7.O.C_2H_5$	.94377, 0°	Spica. J. C.
" " "	"	.86369, 100°	167.
Orthoisopropylphenyl eth-	"	.94438, 0°	Fileti. G. C.
yl oxide. " "	"	.85918, 100°	113.
Butyl anisol	$C_6H_4.C_4H_9.O.CH_3$	.9368, 27°	Studer. Be 2187.
Methyl thymol	$C_{10}H_{13}.O.CH_3$	.941, 18°	Engelhardt an schinoff. J. 1
" "	"	.953898, 0°	Two sampl sati and Pi Ber. 8, 71.
" "	"	.869281, 100°	
" "	"	.954814, 0°	
" "	"	.870459, 100°	
" "	"	.9531, 0°	Pinette. A.
" "	"	.7635, 216°.2	248, 32.
Ethyl thymol	$C_{10}H_{13}.O.C_2H_5$	.93866, 0°	Spica. J. C.
" "	"	.85758, 100°	460.
" "	"	.9334, 0°	Pinette. A.
" "	"	.7400, 226°.9	248, 32.
Propyl thymol	$C_{10}H_{13}.O.C_3H_7$	.9276, 0°	"
" "	"	.7215, 243°	
Butyl thymol	$C_{10}H_{13}.O.C_4H_9$	.9230, 0°	"
" "	"	.7108, 258°.3	
Normal heptyl thymol	$C_{10}H_{13}.O.C_7H_{15}$	.9097, 0°	"
" " "	"	.6712, 306°.7	
Normal octyl thymol	$C_{10}H_{13}.O.C_8H_{17}$	.9026, 0°	"
" " "	"	.6608, 319°.8	
Metaxylyl ethyl oxide	$C_6H_4.CH_3.CH_2.O.C_2H_5$.	.9302, 17°	Radziszewski Wispek. B 1746.
Paraxylyl ethyl oxide	"	.9304, 17°	Radziszewski Wispek. B 1745.
Diphenylcarbyl ethyl oxide.	$(C_6H_3)_2CH.O.C_2H_5$	1.029, 20°	Linnemann.
Benzyl anisol	$C_6H_4.C_7H_7.O.CH_3$	1.073, 0°	Paterno. B.
" "	"	.993, 100°	18, 77.
Phenylvinyl ethyl oxide	$C_{10}H_{12}O$	.9812, 0°	Erlenmeyer. 14, 1868.
Orthovinylanisoil	$C_6H_4.C_2H_3.O.CH_3$	1.0095, 15°	Perkin. J. C.
"	"	1.000, 30°	211.
Paravinylanisoil	"	1.002, 15°	"
"	"	.9956, 30°	
Orthoallylanisöil	$C_6H_4.C_3H_5.O.CH_3$	.9972, 15°	
"	"	.9884, 30°	"
"	"	.9793, 45°	

Name.	Formula.	Sp. Gravity.	Authority.
1.4	$C_6H_4.C_3H_5.O.CH_3$	.984, 20°	Landolph. C. R. 82, 227.
Natural	"	.9858, 30°	Perkin.
Artificial	"	.9852, 30°	Perkin.
"	"	.9761, 45°	Perkin.
	"	.9887, 21°.3	Schiff. A. C. P. 223, 247.
	"	.99132, 14°.9	Nasini and Bernheimer. G.C.I. 15, 50.
	"	.98556, 21°.6	Nasini and Bernheimer. G.C.I. 15, 50.
	"	.97595, 34°.4	Nasini and Bernheimer. G.C.I. 15, 50.
	"	.94041, 77°.8	Nasini and Bernheimer. G.C.I. 15, 50.
	"	.9869, 21°	Gladstone. J.C.S. 49, 623.
Artificial	"	.9870, 21°	Gladstone. J.C.S. 49, 623.
nylanisöil	$C_6H_4.C_4H_7.O.CH_3$	.9817, 15°	Perkin. J. C. S. 33, 211.
"	"	.9740, 30°	Perkin. J. C. S. 33, 211.
ylanisöil	"	.9733, 30°	" "
lyl oxide	$C_6H_5.O.C_3H_5$	.9825, 17°.6	Nasini. Bei. 9, 331.
lyl oxide. 1.4	$C_7H_7.O.C_3H_5$	.9869, 10°	" "
opargyl oxide	$C_6H_5.O.C_3H_3$	1.246, 0°	Henry. Ber. 16, 1378.
1.2	$C_6H_4(OCH_3)_2$	1.086, 15°	Merck. J. 11, 256.
resorcin. 1.3	"	1.075, 0°	Coninck. Ber. 18, 1992.
	"	1.0803, 0°	Schiff. Ber. 19, 560.
	"	1.0317, 55°.8	Schiff. Ber. 19, 560.
	"	1.0104, 79°.2	Schiff. Ber. 19, 560.
	"	.9566, 135°.5	Schiff. Ber. 19, 560.
	"	.8752, 215°	Schiff. Ber. 19, 560.
diphenate	$CH_2(OC_6H_5)_2$	1.1136, 18°	Henry. Ann. (5), 30, 269.
"	"	1.092, 20°	Arnhold. A. C. P. 240, 192.
diorthokresy-	$CH_2(OC_7H_7)_2$	1.019, 50°, 1.	" "
dimetakresy-	"	1.052, 50°, 1.	" "
diparakresylate	"	1.034, 50°, 1.	" "
dibenzylate	"	1.053, 20°	" "
dithymylate	$CH_2(OC_{10}H_{13})_2$	.979, 50°, 1.	" "
diphenate	$C_2H_4(OC_6H_5)_2$	1.018, 11°	Henry. Ber. 16, 1378.

24th. Aromatic Acids and their Paraffin Ethers.

NAME.	FORMULA.	SP. GRAVITY.	AUTH
Benzoic acid	$C_6H_5 . COOH$	1.29, cryst.	Kopp.
" "	"	1.201, 21°, s.	Mendelej 274.
" "	"	1.206, 25°.8, l.	
" "	"	1.227, 27°, l.	
" "	"	1.0838, 121°.4	Kopp. J.
" "	"	1.337, sublimed	Rüdorff. B
" "	"	1.288	Schröder. 561.
" "	"	1.291 } 4°	
" "	"	1.297	
" "	"	1.0800, 121°.4	Schiff. A. 247.
Methyl benzoate	$C_8H_8O_2$	1.10, 17°	Dumas an Ann. (2)
" "	"	1.1026, 0°	Kopp. A. 257.
" "	"	1.0876, 16°.8	
" "	"	1.0921, 12°.3	Mendelejef
" "	"	1.0862, 20°	Brühl. Bei
" "	"	1.100, 10°	De Heen. 813.
" "	"	1.103, 15°	Stohmann, and Her P. C. (2)
Ethyl benzoate	$C_9H_{10}O_2$	1.0539, 10°.5	Dumas and P. A. 12
" "	"	1.06, 18°	Deville. A 188.
" "	"	1.049, 14°	Delffs. J.
" "	"	1.0657, 0°	Kopp. A. 257.
" "	"	1.0556, 10°.5	
" "	"	1.0517, 14°.1	Mendelejef
" "	"	1.048, 20°	Naumann. 2016.
" "	"	1.0473, 20°	Brühl. Be
" "	"	1.0502, 16°	Linnemann P. 160, 1
" "	"	1.160, 10°	De Heen. 813.
" "	"	1.050, 15°	Stohmann, and Herz P. C. (2),
Propyl benzoate	$C_{10}H_{12}O_2$	1.0316, 16°	Linnemann P. 161, 2
" "	"	1.0248, 15°	Stohmann, and Herz P. C. (2),
Isopropyl benzoate	"	1.054, 0°	Silva. Z.
" "	"	1.013, 25°	
Butyl benzoate	$C_{11}H_{14}O_2$	1.000, 20°	Linnemann (4), 27, 2
" "	"	1.002, 10°	De Heen. 813.
Isobutyl benzoate	"	1.0013, 15°	Stohmann,

Name.	Formula.	Sp. Gravity.	Authority.
.zoate	$C_{12}H_{16}O_2$	1.0039, 0°	Kopp. A. C. P. 94, 257.
"	"	.9925, 14°.4	
"	"	1.002, 10°	De Heen. Bei. 10, 818.
"	"	.9916, 15°	Stohmann, Rodatz, and Herzberg. J. P. C. (2), 36, 1.
nzoate	$C_{13}H_{18}O_2$	.99846, 17°	Frentzel. Ber. 16, 745.
acid	$C_6H_4.OH.COOH$. 1.2	1.448	Rüdorff. Ber. 12, 251.
"	"	1.482, 4°	Schröder. Ber. 12, 1611.
"	"	1.485, 4°	
benzoic acid	" 1.3	1.478, 4°	" "
benzoic acid	" 1.4	1.460, 4°	" "
"	"	1.476, 4°	
salicylate, oil of lenta.	$C_8H_8O_3$	1.180, 15°	Pettigrew. Am. J. P. 55, 385.
alicylate	$C_{10}H_{12}O_3$	1.021, 21°	Cahours. Les Mondes, 32, 280.
licylic acid. 1.2	$C_6H_4.OCH_3.COOH$	1.18, 10°	Cahours. Ann. (3), 10, 327.
"	"	1.1845, 15°	Mendelejeff. J. 13, 7.
"	"	1.1969, 0°	Kopp. A. C. P. 94, 257.
"	"	1.1819, 16°	
"	"	1.1801, 20°	Landolt. Bei. 7, 847
id. 1.4	"	1.364, 4°	Schröder. Ber. 12, 1611.
"	"	1.376, 4°	
"	"	1.385, 4°	
icylic acid. 1.2	$C_6H_4.OC_2H_5.COOH$	1.097	Baly. J. C. S. 2, 28.
"	"	1.1843, 10°	Delffs. J. 7, 26.
ylsalicylate	$C_{11}H_{14}O_3$	1.1005	Göttig. Ber. 9, 1478.
thylmetaoxyben-	"	1.0875, 0°	Heintz. A.C.P. 153, 332.
"	"	1.0725, 20°	
sopropylsalicylate	"	1.062, 20°	Kraut. J. 22, 566.
echuic acid	$C_6H_3(OH)_2.COOH$	1.541, 4°	Schröder. Ber. 12, 1611.
"	"	1.542, 4°	
id	$C_6H_2(OH)_3.COOH$	1.685, 4°	" "
"	"	1.703, 4°	
etic, or alpha-acid.	$C_6H_5.CH_2.COOH$	1.3, solid	Möller and Strecker. J. 12, 299.
"	"	1.0778, 83°	
"	"	1.0334, 135°	
"	"	1.220, 4°	Schröder. Ber. 12, 1611.
"	"	1.236, 4°	
"	"	1.0847, 76°.4	Schiff. A. C. P. 223, 247.
henylacetate	$C_9H_{10}O_2$	1.044, 16°	Radziszewski. Z. C. 12, 358.
nylacetate	$C_{10}H_{12}O_2$	1.031	" "
enylacetate	$C_{11}H_{14}O_2$	1.0142, 18°	Hodgkinson. J. C. S. 37, 483.
pionic, or hy-mic acid.	$C_6H_5.C_2H_4.COOH$	1.07115, 48°.7	Weger A. C. P. 221, 61.
	"	.8780, 279°.8	
ylpropionate	$C_{10}H_{12}O_2$	1.0455, 0°	Erlenmeyer. J. 19, 866.
"	"	1.018, 49°	
"	"	1.0473, 0°	Weger. A. C. P. 221, 61.
"	"	.83824, 236°.6	

6

Name.	Formula.	Sp. Gravity.	Autho[rity].
Ethyl phenylpropionate	$C_{11}H_{14}O_2$	1.0348, 0° }	Erlenmey[er] 367.
" "	"	.9925, 49° }	
" "	"	1.0147, 20	Brühl.
" "	"	1.0348, 0°	Weger. 221, 61
" "	"	.80182, 248°.1	
Propyl phenylpropionate	$C_{12}H_{16}O_2$	1.0152, 0°	"
" "	"	.77886, 262°.1	
Amyl phenylpropionate	$C_{14}H_{20}O_2$	.9807, 0° }	Erlenmey[er] 367.
" "	"	.9520, 49° }	
Methyl oxyphenylacetate	$C_9H_{10}O_3$	1.15, 17°.5	Fritzsche. 2178.
Ethyl oxyphenylacetate	$C_{10}H_{12}O_3$	1.104, 17°.5	"
Ethyl oxyphenylpropionate	$C_{11}H_{14}O_3$	1.360, 17°.5	Saarbach. (2), 21,
Phthalic acid	$C_6H_4.(COOH)_2$	1.585 }	Schröder. 1070.
" "	"	1.593 }	
Methyl phthalate	$C_{10}H_{10}O_4$	1.2001 } 18°.5	Three [preparations]. zigung. Diss. 1883. Graebe, 361.
" "	"	1.2022 } 18°.5	
" "	"	1.2101 } 18°.5	
" "	"	1.1958 } 16°	
" "	"	1.1974 } 16°	
" "	"	1.2058 } 16°	
" "	"	1.1958 } 18°	
" "	"	1.1938 } 18°	
" "	"	1.2081 } 18°	
Ethyl phthalate	$C_{12}H_{14}O_4$	1.1816 } 12°.5	Two pr[eparations]. Schm[...] Inaug. [...] langen,
" "	"	1.1821 } 12°.5	
" "	"	1.1294 } 15°.5	
" "	"	1.1295 } 15°.5	
Orthophenyleneglyoxylic acid.	$C_6H_4.COH.COOH$	1.404	Colson and C. R. 10[...]
Cinnamic, or phenylacrylic acid.	$C_6H_5.CH.CH.COOH$	1.245	E. Kopp. 37, 280.
" "	"	1.195	Schabus.
" "	"	1.246 } 4°	Schröder. 1611.
" "	"	1.249 } 4°	
" "	"	1.0565, 133°	Weger. 221, 61.
" "	"	.90974, 300°	
Methyl cinnamate	$C_{10}H_{10}O_2$	1.106	E. Kopp. 1876.
" "	"	1.0415, 36°	Weger. 221, 61.
" "	"	.85888, 259°.6	
Ethyl cinnamate	$C_{11}H_{12}O_2$	1.126, 0°	E. Kopp. 1876.
" "	"	1.13	Marchand. 82, 269.
" "	"	1.0556, 0°	H. Kopp. 95, 307.
" "	"	1.0498, 20°.2	
" "	"	1.0558 } 0°	Weger. A[...] 61.
" "	"	1.0558 } 0°	
" "	"	1.0562 } 0°	
" "	"	.82143, 271°	
" "	"	1.0490, 20°	Brühl. A[...]
Propyl cinnamate	$C_{12}H_{14}O_2$	1.0435	Kahlb[illegible]
" "	"	1.0435, 0°	[illegible]
" "	"	[illegible], 283°.1	

Name.	Formula.	Sp. Gravity.	Authority.
Methyl α methylorthoxyphenylacrylate.	$C_{11} H_{11} O_3$	1.1404, 15°	Perkin. J. C. S. 39, 409.
" "	"	1.1277, 30°	
" "	"	1.1465, 8°.5	Gladstone. Bei. 9, 249.
Methyl β methylorthoxyphenylacrylate.	"	1.1486, 15°	Perkin. J. C. S. 39, 409.
" "	"	1.1362, 30°	
" "	"	1.1556, 9°.5	Gladstone. Bei. 9, 249.
Ethyl α ethylorthoxyphenylacrylate.	$C_{13} H_{16} O_3$	1.084, 15°	Perkin. J. C. S. 39, 409.
" "	"	1.074, 30°	
Ethyl β ethylorthoxyphenylacrylate.	"	1.090, 15°	" "
" "	"	1.090, 10°	Gladstone. Bei. 9, 249.
Methyl α methylorthoxyphenylcrotonate.	$C_{12} H_{14} O_3$	1.1112, 15°	Perkin. J. C. S. 39, 409.
" "	"	1.1061, 30°	
Methyl β methylorthoxyphenylcrotonate.	"	1.1279, 15°	" "
" "	"	1.1136, 30°	
Methyl α methylorthoxyphenylangelate.	$C_{13} H_{16} O_3$	1.1044, 15°	" "
" "	"	1.0882, 30°	
Methyl β methylorthoxyphenylangelate.	"	1.1100, 15°	" "
" "	"	1.1008, 30°	
Mandelic acid	$C_6H_5.CHOH.COOH$	1.355 } 4°	Schröder. Ber. 12, 1611.
" "	"	1.367 } 4°	
Cuminic acid	$C_6H_4.C_3H_7.COOH$	1.156 } 4°	" "
" "	"	1.169 } 4°	
Quinic acid	$C_7 H_{12} O_6$	1.637, 8°.5	Watts' Dictionary.
Ethyl veratrate	$C_{11} H_{14} O_4$	1.141, 18°	Will. A. C. P. 37, 198.
Ethyl phenylglyoxylate	$C_{10} H_{10} O_3$	1.121, 17°.5	Claisen. Ber. 12, 629.
Ethyl phenylacetacetate	$C_{12} H_{14} O_3$	1.0861, 16°	Hodgkinson. J. C. S. 37, 481.
Ethyl benzylacetacetate	$C_{13} H_{16} O_3$	1.036, 15°.5	Conrad. Ber. 11, 1056.
Ethyl methylbenzylacetacetate.	$C_{14} H_{18} O_3$	1.046, 23°	" "
Ethyl benzylmalonate	$C_{14} H_{18} O_4$	1.077, 15°	Conrad and Bischoff. A. C. P. 204, 203.
Ethyl benzylmethylmalonate.	$C_{15} H_{20} O_4$	1.064, 19°	Conrad and Bischoff. Ber. 13, 595.
Ethyl benzylidenemalonate.	$C_{14} H_{16} O_4$	1.1105, 15°	Claisen and Crismer. A. C. P. 218, 132.
Ethyl benzylacetosuccinate.	$C_{17} H_{22} O_5$	1.088, 15°	Conrad. Ber. 11, 1058.
Monomethyl propylpyrogallate. Picamar.	$C_{10} H_{14} O_3$	1.10	Reichenbach.
"	"	1.10288, 15°	Pastrovich. M. C. 4, 183.

25th. Ethers of Aromatic Radicles.

NAME.	FORMULA.	SP. GRAVITY.	AUTH…
Phenyl acetate	$C_8H_8O_2$	1.074	Boughton. 580.
Cresyl acetate	$C_9H_{10}O_2$	1.0499, 28°	Gladstone. 249.
Benzyl acetate	"	1.057, 16°.5	Conrad and … kinson. 198, 312.
" "	"	1.0400, 21°	Gladstone 249.
" "	"	1.03814, 22°.5	(Gladstone 249.)
Paraxylyl acetate	$C_{10}H_{12}O_2$	1.0264, 15°	Jacobsen. 28.
Ethylphenyl acetate	"	1.0286	Radziszews… 9, 872.
" "	"	1.0507, 22°.5	Gladstone. 249.
Methylphenylcarbyl acetate.	"	1.05, 17°	Radziszews… 5, 261.
Parapropylphenyl acetate	$C_{11}H_{14}O_2$	1.029, 0°	Spica. Ber.
" "	"	.9425, 100°	(Spica. Ber.)
Orthoisopropylphenyl acetate.	"	1.02714, 0°	Fileti. G. 118.
" "	"	.93818, 100°	(Fileti. G. 118.)
Paraisopropylphenyl acetate.	"	1.026, 0°	Paterno and … Ber. 10, …
Mesityl acetate	"	1.0908, 16°.5	Wispek. … 1577.
Thymyl acetate	$C_{12}H_{16}O_2$	1.009, 0°	Two prep… Paterno. (2), 18, 68…
" "	"	.924, 100°	(Two prep… Paterno.)
" "	"	1.010, 0°	(Two prep… Paterno.)
Butylphenyl acetate	"	.990, 24°	Studer. 2187.
Diphenylcarbyl acetate	$C_{15}H_{14}O_2$	1.49, 22° ?	Linnemann. P. 133, 2…
Benzyl propionate	$C_{10}H_{12}O_2$	[illegible], 16°.5	Conrad and … kinson. 198, 312.
[illegible]	[illegible]	[illegible]	"
[illegible]	"	[illegible]	Hodgkinson. P. 193, 3…
		[illegible]	Gladstone. 249.
[illegible]		[illegible]	"
[illegible]	[illegible]	[illegible]	Slawik. J. 13, 59.
[illegible]	[illegible]	[illegible]	Conrad and … kinson. 198, 312.
[illegible]	[illegible]	[illegible]	"
[illegible]	[illegible]	[illegible]	"
[illegible]		[illegible]	"
[illegible]		[illegible]	Hodgkinson. [illegible]
[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
cinnamate	$C_{16}H_{14}O_2$	1.098, 14°	Scharling. J. 9, 680.
"	"	1.1145, 16°	Busse. Ber. 9, 881.
ic acetate	$C_{11}H_{12}O_2$	.9416, 22°	Gladstone. Bei. 9, 249.
ene diacetate	$C_{13}H_{16}O_4$	1.12, 20°	Robinet and Colson. C. R. 96, 1868.
henyl carbonate	$C_9H_{10}O_3$	1.117, 0°	Fatianoff. J. 17, 477.
" "	"	1.1184, 0°	Pawlewski. Ber. 17, 1205.

26th. Aromatic Aldehydes.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
lehyde. Almond oil.	$C_6H_5.COH$	1.075	Chardin-Hardancourt.
"	"	1.088, 15°	Guckelberger. J. 1. 850.
"	"	1.043	Wöhler and Liebig.
"	"	1.0636, 0°	Kopp. A. C. P. 94, 257.
"	"	1.0499, 14°.6	
"	"	1.0504	Mendelejeff. J. 13, 7.
"	"	1.067	Lippmann and Hawliczek. Ber. 9, 1461.
"	"	1.0471, 20°	Landolt.
"	"	1.0474, 20°	
"	"	1.0455, 20°	Brühl. Bei. 4, 782.
aldehyde	$C_6H_4CH_3.COH$	1.037, 0°	Gundelach. B. S. C. 26, 45.
"	"	1.024, 22°	
acetic aldehyde	"	1.085	Radziszewski. Ber. 9, 372.
c aldehyde. Cuminol.	$C_6H_4.C_3H_7.COH$	.9832, 0°	Kopp. A. C. P. 94, 257.
"	"	.9727, 18°.4	
"	"	.9751, 15°	Mendelejeff. J. 13, 7.
"	"	.9775, 20°	Gladstone. Bei. 9, 249.
ylpropyl aldehyde	$C_6H_4.CH_3.CH_2.CH_2.COH$	.9941, 18°	v. Richter and Schüchner. Ber. 17, 1931.
ic aldehyde, or salicylol.	$C_6H_4.OH.COH$	1.1731, 18°.8	Piria. A. C. P. 29, 300.
"	"	1.1671, 20°	Landolt. Bei. 7, 847.
aldehyde	$C_6H_4.OCH_3.COH$	1.09, 20°	Cahours. Ann. (3), 14, 484.
"	"	1.1228, 18°	Rossel. Z. C. 12, 561.
ic aldehyde	C_9H_8O	1.0497, 20°	Brühl. A. C. P. 235, 1.

27th. Aromatic Ketones.

NAME.	FORMULA.	SP. GRAVITY.	AUTHOR
Methyl phenyl ketone	$C_6H_5.CO.CH_3$	1.032, 15°	Friedel. J.
Methyl benzyl ketone	$C_7H_7.CO.CH_3$	1.010, 18°	Radziszewski 3, 199.
Methyl tolyl ketone	"	.9891, 22°	Essner and Ber. 17, r
Propyl phenyl ketone	$C_6H_5.CO.C_3H_7$	.990, 15°	Schmidt a berg. J. (12, 75.
" " "	"	.992, 15°	Popoff. Ber
" " "	"	.9949, 15°	Einhorn. I Tübingen
Isopropyl phenyl ketone	"	.994, 12°	"
" " "	"	.972, 30°	"
" " "	"	.984, 60°	"
Methyl xylyl ketone	$C_8H_9.CO.CH_3$	.9962, 19°	Claus and ' Ber. 18, 1
Isobutyl phenyl ketone	$C_6H_5.CO.C_4H_9$	.998, 17°.5	Popoff. A.(151.
Tolyl phenyl ketone	$C_6H_5.CO.C_7H_7$	1.088, 17°.5	Senff. A. C. 252.
Acetocinnamone	$C_8H_7.CO.CH_3$	1.008	Engler an B. S. C. 2
Propionylacetophenone	$C_{11}H_{12}O_2$	1.081, 15°	Stylos. Ber.
Butyrylacetophenone	$C_{12}H_{14}O_2$	1.061, 15°	"

28th. Camphors, Essential Oils, Etc.

NAME.	FORMULA.	SP. GRAVITY.	AUTHOR
Laurel camphor	$C_{10}H_{16}O$	.986	Watts' Dict
" "	"	.9[illegible]	Watts' Dict
Myristicol	"	.9466, 20°	Gladstone. (2), 10, 1.
Absinthol	"	.973, 24°	Leblanc. 56, 857.
"	"	.9[illegible], 20°	Gladstone. (2), 10, 1.
"	"	.9[illegible], 2[illegible]°	Gladstone. 249.
[illegible]	"	.8[illegible], 20°	Two s Gladst S. (2), 1
[illegible]	"	.8[illegible], 20°	Two s Gladst S. (2), 1
[illegible]	"	.8[illegible]	Grosser. [illegible]
[illegible]		.8[illegible], 20°	[illegible]
[illegible]	"	.8[illegible]	
[illegible]	"	.8[illegible]	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
legium micran-	$C_{10}H_{16}O$	.932, 17°	Butlerow. J. 7, 595.
of tansy	"	.918, 4°	Bruylants. Ber. 11, 451.
	"	.924, 15°	Jahns. Ber. 16, 2930.
l	$C_{10}H_{18}O$	.9160, 20°	Gladstone. J. C. S. (2), 10, 1.
	"	.8900, 21°.5	" "
ne hydrate	"	.903, 17°	Schmidl. J. 13, 480.
"	"	.9160, 20°	Kanonnikoff. Bei. 7, 592.
riander	"	.871, 14°	Kawalier. J. 5, 624.
"	"	.8719, 15°	Grosser. Ber. 14, 2486.
	"	.92067, 16°	Wallach and Brass. A. C. P. 225, 291.
	"	.9267, 20°	Wallach. A. C. P. 245, 195.
calyptus oleosa	"	.9075, 20°	Gladstone. J. C. S. (2), 10, 1.
	"	.8851, 15°	Jacobsen. Z. C. 14, 171.
	"	.8818, 21°	
cari kanali	"	.868, 15°	Morin. J. C. S. 40, 738.
laleuca ericifolia	"	.8960, 20°	Gladstone. J. C. S. (2), 10, 1.
laleuca linarifolia	"	.8985, 20°	" "
nthol	"	.9032	Moriya. C. N. 42, 268.
e	"	.9126, 0°	Atkinson and Yoshida. J. C. S. 41, 295.
	"	.9048, 10°	
	"	.8972, 20°	
	"	.8819, 40°	
	"	.8665, 60°	
	"	.8511, 80°	
	"	.8355, 100°	
nphor	"	1.02	Plowman. J. C. S. (2), 12, 582.
smitopsis asteris-	"	.921	Gorup-Besanez. J. 7, 596.
	"	.934, 15°	Sigiura and Muir. J. C. S. 33, 295.
	"	.938, 15°	Muir. J. C. S. 37, 13.
	"	.935, 0°	Bouchardat and Voiry. C. R. 106, 664.
l	"	.961, 0°	Bouchardat and Lafont. B. S. C. 45, 295.
	"	.950, 15°	
	"	.9533, 0°	Lafont. B. S. C. 49, 823.
	"	.952, 0°	Bouchardat and Voiry. B. S. C. 47, 870.
	"	.9296, 10°	Gladstone. J. C. S. 49, 623.

[illegible]inol (J. 1, 726) is now known to be a mixture.

NAME.	FORMULA.	SP. GRAVITY.	AUTH[ORITY]
Terpinol	$C_{10}H_{18}O$	.9357, 20°	Wallach. 245, 196.
Turpentine hydrate	"	.9274, 16°	Tilden. C.
" "	"	.9339, 0°	Flawitzky. 2355.
" "	"	.9201, 18°	
" "	"	.9511, 10°	Renard. B
" "	"	.9188	Kanonnik 7, 592.
" "	"	.9335, 0°	Flawitzky. 1959.
" "	"	.9189, 19°.5	
From wormseed oil	"	.9275, 16°	Hell and Ber. 17,
" " "	"	.8981, 50°	
" " "	"	.8538, 100°	
Menthol	$C_{10}H_{20}O$	.9394 20°	Two samp stone. J 10, 1.
"	"	.9515 20°	
"	"	.89, 15°	Moriya. (268.
"	"	.8786, 20°	Kanonnik 592.
Ethyl camphor	$C_{12}H_{20}O$	.946, 22°	Baubigny.
Eucalyptol	"	.905, 8°	Cloëz. Z. (
"	"	.9173, 15°	Poehl. J. 538.
From wormseed oil	"	.919, 20°	Völckel.
Amyl camphor	$C_{15}H_{26}O$	.919, 15°	Baubigny.
Acetyl camphor	$C_{12}H_{18}O_2$	.986, 20°	Baubigny.
Methyl borneol	$C_{11}H_{20}O$	.933, 15°	Baubigny.
Ethyl borneol	$C_{12}H_{22}O$	.916, 23°	"
From Achillea ageratum	"	.849, 20°	De Luca. 81, 326.
From Angustura bark	$C_{13}H_{24}O$	.934	Herzog. J
Patchouli camphor	$C_{15}H_{26}O$	1.051, 4°.5	Gal. Z. C
Oil of ginger	$C_{40}H_{130}O_3$ (?)	.893	Papousek.
Camphorogenol	$C_{10}H_{16}O_2$	.9794, 20°	Yoshida. 47, 779.
Terpilene formate	$C_{11}H_{18}O_2$	.9986, 0°	Two samp font. B 323.
" "	"	[illegible]	
Terpilene acetate	$C_{12}H_{20}O_2$	[illegible], 0°	Bouchardat font. C.R.
Terebenthene acetate	"	[illegible], 0°	"
Terebene acetate	"	[illegible], 0°	Bouchardat font. C.R.
Camphene acetate	"	[illegible], 0°	Lafont. (1718.
[illegible]	[illegible]	[illegible]	Schröder. 1070.
		[illegible]	
[illegible]	[illegible]	[illegible]	Malaguti. 54, 164.
[illegible]	[illegible]	[illegible]	Malaguti. 22, 48.
		[illegible]	Dehmel. 321.
		[illegible]	
[illegible]	[illegible]	[illegible]	"
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
ıphocarbonate	$C_{13} H_{20} O_3$	1.052, 15°	Roser. Ber. 18, 3112.
ıe	$C_8 H_{12} O$	.974, 6°	Chautard. J. 10, 483.
mphresic acid	$C_9 H_{22} O_7$	1.128, 13°	Schwanert. J. 16, 397.
aphresate	$C_{16} H_{26} O_7$	1.0775, 13°	" "

29th. Miscellaneous Compounds.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
	$C_6 H_4 O_2$	1.307	Schröder. Ber. 18, 1070.
	"	1.318	
	$C_8 H_{10} O$	1.015, 12°	Sigel. A. C. P. 170, 345.
	$C_{10} H_{14} O$	.953, 15°	Völckel.
	"	.9580, 20°	Gladstone. J. C. S. (2), 10, 1.
	"	.9562, 20°	" "
	"	.959	
	"	.9593 20.	Beyer. Ber. 16, 1387.
	"	.9598	
	"	.960, 18°.5	Flückiger.
	"	.7866, 228°	Schiff. Ber. 19, 560.
	"	.9667, 11°	Gladstone. J. C. S. 49, 623.
	$C_{10} H_{12} O_2$	1.076	Stenhouse. A. C. P. 95, 106.
	"	1.0684, 14°	Williams. A. C. P. 107, 240.
	"	1.066, 15°	Church. J. C. S. (2), 13, 113.
	"	1.0778, 0°	Wassermann. J. C. S. (2), 1, 706.
	"	1.063, 18°.5	
	"	1.0703, 14°	Tiemann and Kraaz. Ber. 15, 2066.
	"	1.066, 17°.5	Gladstone. Bei. 9, 249.
l	"	1.080, 16°	Tiemann and Kraaz. Ber. 15, 2066.
genol ?	$C_{11} H_{14} O_2$	1.046, 15°	Church. J. C. S. (2), 13, 115.
"	"	1.055, 15°	Petersen. Ber. 21, 1060.
nol	$C_{12} H_{16} O_2$	1.026, 0°	Wassermann. A. C. P. 179, 376.
	"	1.0117, 18°.5	
enol	$C_{13} H_{18} O_2$	1.0024, 16°	Wassermann. Ber. 10, 237.
genol	$C_{14} H_{20} O_2$	.985, 15°	" "
sol	$C_{15} H_{22} O_2$	.976, 16°	Wassermann. Ber. 10, 238.
[illegible]	$C_{12} H_{16} O_2$	1.018, 15°	" "
	$C_9 H_8 O_2$	.9207	Gladstone. Bei. 9, 249.

Name.	Formula.	Sp. Gravity.	Autho[rity]
Safrol	$C_{10}H_{10}O_2$	1.1141, 0°	Grimaux a[nd] Z. C. 12
"	"	1.0956, 18°	J. Schiff. 1985.
Coeruliguol	$C_{10}H_{14}O_2$	1.05645, 15°	Pastrovich 189.
Phthalic anhydride	$C_8H_4O_3$	1.527 } 4°	Schröder. 1611.
" "	"	1.530 } 4°	
Benzoic anhydride	$C_{14}H_{10}O_3$	1.231 } 4°	"
" "	"	1.234 } 4°	
" "	"	1.247 } 4°	
Benzo-oenanthic anhydride.	$C_{14}H_{18}O_3$	1.043	Malerba.
Benzo-cinnamic anhydride.	$C_{16}H_{12}O_3$	1.184, 23°	Gerhardt.
Benzo-cuminic anhydride	$C_{17}H_{16}O_3$	1.115, 23°	Gerhardt.
Pyruvyl benzoate	$C_{10}H_{10}O_3$	1.148, 25°, s.	Romburg[h] 44, 63.
Tannic acid	$C_{14}H_{10}O_9$	1.097	W. C. Smi[th] J. P. 53
Benzoyl glycollic ether	$C_{11}H_{12}O_4$	1.1509, 20°.4	Andrieff.
Propylene ethylphenylketate.	$C_{12}H_{16}O_3$	.988, 22°	Morley an[d] Ber. 17,
Isomer of benzil	$C_{14}H_{10}O_2$	1.104, 10°	Alexeyeff.
Saliretin	$C_{14}H_{14}O_3$	1.1161, 25°	Beilstein [and] heim. J
Isobenzpinacone	$C_{26}H_{22}O_2$	1.10, 19°	Linneman[n] 556.
Derivative of propyl phenylacetate.	$C_{24}H_{20}O_3$	1.039, 17°	Hodgkins[on] S. 37, 48
Derivative of ethyl phenylacetacetate.	$C_{18}H_{20}O_2$	1.0628, 20°	"
α Naphtol	$C_{10}H_8O$	1.224, 4°	Schröder. 1611.
"	"	1.09539, 98°.7	Nasini an[d] heimer. 50.
β Naphtol	"	1.217, 4°	Schröder. 1611.
"	"	1.23	Brügelman[n] 17, 2359
Naphtol	"	.9048, at boiling point.	Ramsay. J 65.
Methyl-[illegible] naphtol	[illegible]	1.0[illegible]36, 13°.9	Nasini a[nd] heimer 15, 50.
	"	1.07[illegible]31, 34°.5	
	"	1.04[illegible]61, 77°.7	
[illegible]	[illegible]	1.04471, 18°.4	"
[illegible]	[illegible]	[illegible]74, 15°	Staedel. Be[r.]
[illegible]	[illegible]	[illegible]24, 0°	Roux. An[n.] 336.
[illegible]	[illegible]	[illegible]	
		[illegible]	Schröder. 1070.
		[illegible]	
		[illegible]	
[illegible]		[illegible]	"
		[illegible]	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Asarone	$C_{12} H_{16} O_3$	1.165, 18°	Butlerow and Rizza. B. S. C. 43, 114.
"	"	1.0743, 60°	
"	"	1.0655, 95°	
Salicin. Natural	$C_{13} H_{18} O_7$	1.4338, 26°	Piria. Ann. (3), 44, 368.
" Artificial	"	1.4257	
Santonin	$C_{15} H_{18} O_3$	1.247, 20°.5	Trommsdorf. A. C. P. 11, 190.
"	"	1.1866	Carnelutti and Nasini. Ber. 13, 2210.
Metasantonin. M. 136°	"	1.1649	" "
" " 160°.5	"	1.1975	
Santonid	"	1.1967	" "
Metasantonid	"	1.046	" "
Parasantonid	"	1.1957	" "
"	"	1.2015, 20°	Nasini. Ber. 14.1513.
Santonic acid	$C_{15} H_{20} O_4$	1.251	Carnelutti and Nasini. Ber. 13, 2210.
Parasantonic acid	"	1.2684	" "
Methyl santonate	$C_{16} H_{22} O_4$	1.1667	" "
Methyl parasantonate	"	1.1777	" "
Ethyl santonate	$C_{17} H_{24} O_4$	1.1481	" "
Ethyl parasantonate	"	1.153	" "
Propyl santonate	$C_{18} H_{26} O_4$	1.1185	" "
" "	"	1.125, 20°	Nasini. G. C. I. 13, 165.
Propyl parasantonate	"	1.153	Carnelutti and Nasini. Ber. 13, 2210.
Isobutyl santonate	$C_{19} H_{28} O_4$	1.1181	" "
Allyl santonate	$C_{18} H_{24} O_4$	1.1484	" "
Styracin	$C_{18} H_{16} O_2$	1.154	Schröder. Ber. 13, 1070.
"	"	1.159	
Pimaric acid	$C_{20} H_{30} O_2$	1.047, 18°	Siewert. J. 12, 510.
Sylvic acid	"	1.1011, 18°	" "
Tropilene	$C_7 H_{10} O$	1.01, 0°	Ladenburg. Ber. 14, 2130.
"	"	1.0091, 0°	Ladenburg. A. C. P. 217, 139.
Cinacrol	$C_{10} H_{18} O_5$	1.05	Hirzel. Watts' Dictionary.
"	"	1.15	
Colophonone	$C_{11} H_{18} O$	.84	Schiel. J. 13, 489.
Apiol	$C_{12} H_{14} O_4$	1.015	Lindenborn. Ber. 9, 1478.
Calophyllum resin	$C_{14} H_{18} O_4$	1.12, cryst.	Levy. C. R. 18, 244.
Antiar resin	$C_{18} H_{24} O$	1.032	Mulder. A. C. P. 28, 307.
Tannin from Persea lingue	$C_{17} H_{17} O_9$	1.352, 10°	Arata. Ber. 14, 2251.
From Sequoia gigantea	$C_{18} H_{20} O_3$	1.045	Lunge and Steinkauler. Ber. 14, 2205.
Turmerol	$C_{19} H_{28} O$	.9016, 17°	Jackson and Menke. A. C. J. 4, 371.
Guyaquillite	$C_{20} H_{26} O_3$	1.092	Dana's Mineralogy.
Hartin	$C_{20} H_{34} O_2$	1.115, 19°	Schrötter. P. A. 59, 45.
Resin from rosewood	$C_{21} H_{21} O_6$	1.2662, 15°	Terreil and Wolff. J. C. S. 38, 559.
Cardol	$C_{21} H_{31} O_2$	.978, 23°	Städeler. J. 1, 577.

Name.	Formula.	Sp. Gravity.	Autho
Ivaol	$C_{26} H_{40} O$	.9346, 15°	Planta-R Z. C. 13,
Cholesterin	$C_{26} H_{44} O$	1.03, melted	Hlasiwetz. 106, 354.
"	"	1.046 } 20°	Mehu. J. 13, 247.
"	"	1.047 } 20°	
Waldivine	$C_{36} H_{48} O_{20}. 5 H_2 O$	1.46	Tanret. J (5), 3, 6
Cochlearin	$C_6 H_7 O_2$. ?	1.248	Maurach. Diction
Aloisol	$C_6 H_8 O_3$. ?	.877, 15°	Robiquet. Diction
Xanthil	$C_4 H_{10} O_3$. ?	.894	Couërbe.
Picrolichenin	?	1.176	Alms. A.
Phycic acid	?	.896	Lamy. J

XLVII. COMPOUNDS CONTAINING C, H, AND]

1st. Cyanides and Carbamines of the Paraffin Series.

Name.	Formula.	Sp. Gravity.	Autr
Methyl cyanide, or acetonitril.	$CH_3. CN$	.8347, 0° }	Kopp. A 867.
" " "	"	.8191, 16° }	
" " "	"	.8052, 0°	Vincent chanal. 747.
" " "	"	.7155, 81°.2	Schiff. I
Methyl carbamine	"	.7557, 14°	Gautier. Schorl Treatis
Ethyl cyanide, or propionitril.	$C_2 H_5. CN$	.7017, 97°	Ramsay. 463.
" " "	"	.80101, 0°	Thorpe. 37, 37
" " "	"	.70098, 97°.08	
" " "	"	.7862, 19°	Gladstone 249.
" " "	"	.7015, 97°	Schiff. I
Ethyl carbamine	"	.787, 15°	Pelouze. Dictio
" "	"	.7889, 12°.6	Frankl Kolbe.
Propyl cyanide, or butyronitril.	$C_3 H_7. CN$	.795, 12°.5	Dumas.
Isopropyl carbamine	"	.7596, 0°	Gautier. 224.
Butyl cyanide, or valeronitril.	$C_4 H_9. CN$	.8164, 0°	Li[illegible]
Isobutyl cyanide, or isovaleronitril.	"	.810	[illegible]
" " "	"	.813, 1	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
utyl cyanide, or iso-aleronitril.	$C_4 H_9 . C N$	.8226, 0°	Erlenmeyer and Hell. A. C. P. 160, 257.
" " "	"	.8146, 10°	
" " "	"	.8060, 20°	
" " "	"	.6921, 129°.8	Schiff. Bei. 9, 559.
" " "	"	.8010, 18°	Gladstone. Bei. 9, 249.
obutyl carbamine	"	.7873, 4°	Gautier. Z. C. 12, 415.
amyl cyanide, or capronitril.	$C_5 H_{11} . C N$	.8061, 20°	Frankland and Kolbe. J. 1, 559.
" " "	"	.8040, 18°	Gladstone. Bei. 9, 249.
" " "	"	.6861, 154°	Schiff. Bei. 9, 559.
enanthonitril	$C_6 H_{13} . C N$	.895, 22°	Mehlis. A.C.P. 185, 368.
eptyl cyanide	$C_7 H_{15} . C N$	.8201, 13°.3	Felletár. J. 21, 634.
ctyl cyanide	$C_8 H_{17} . C N$	.786, 16°	Eichler. Ber. 12, 1888.
Isoöctyl cyanide	"	.8187, 14°	Felletár. J. 21, 634.
Lauronitril	$C_{11} H_{23} . C N$	.8350, 0°	Krafft and Stauffer. Ber. 15, 1728.
"	"	.8273, 15°	
"	"	.7675, 98°.9	
Myristonitril	$C_{13} H_{27} . C N$	.8281, 19°	" "
"	"	.8241, 25°	
"	"	.7724, 99°	
Palmitonitril	$C_{15} H_{31} . C N$	.8224, 31°	" "
"	"	.8186, 40°	
"	"	.7761, 98°.9	
Stearonitril	$C_{17} H_{35} . C N$	.8178, 41°	" "
"	"	.8149, 45°	
"	"	.7790, 99°.2	

2d. Amines of the Paraffin Series.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Trimethylamine	$N . (C H_3)_3$	.673, 0°	Blennard. Roscoe and Schorlemmer's Treatise.
Ethylamine	$N H_2 . C_2 H_5$	.6964, 8°	Wurtz. J. 3, 446.
Diethylamine	$N H . (C_2 H_5)_2$	.7262, 0°	Oudemans. Bei. 6, 358. Values given for every 5°.
"	"	.7159, 10°	
"	"	.7055, 20°	
"	"	.6949, 30°	
"	"	.6844, 40°	
"	"	.6735, 50°	
"	"	.6680, 55°	
"	"	.7092, 19°	Gladstone. Bei. 9, 249.
"	"	.6684 } 56°	Schiff. Ber. 19, 560.
"	"	.6686 } 56°	
Triethylamine	$N . (C_2 H_5)_3$	.7277, 20°	Brühl. Bei. 4, 779.
"	"	.7317, 19°	Gladstone. Bei. 9, 249.

NAME.	FORMULA.	SP. GRAVITY.	AUTHO
Triethylamine	$N.(C_2H_5)_3$	.6621, 89°	Schiff. Be
Propylamine	$NH_2.C_3H_7$	.7283, 0°	Silva. Z. (
"	"	.7124, 21°	
"	"	.7186, 20°	Linnemann P. 161, 1
"	"	.6883, 49°.5	Schiff. B
Isopropylamine	"	.690, 18°	Siersch. J
Dipropylamine	"	.756, 0°	Vincent. ref. 680.
Diisopropylamine	$NH.(C_3H_7)_2$	.722, 22°	Siersch. J
Tripropylamine	$N.(C_3H_7)_3$	.7699, 0°	Zander. 214, 181.
"	"	.6426, 156°.5	
"	"	.771, 0°	Vincent. ref. 680.
Butylamine	$NH_2.C_4H_9$	.7553, 0°	Lieben an A. C. P.
"	"	.7333, 26°	
"	"	.7401, 20°	Linnema Zotta. 27, 275.
Isobutylamine	"	.7357, 15°	Linnemann (4), 27, 2
"	"	.6865, 67°.7	Schiff. Ber
Trimethylcarbinolamine	"	.6987, 15°	Linnemann (4), 27, 2
"	"	.7137, 0°	Rudneff. 1028.
"	"	.7054, 8°	
"	"	.6931, 15°	
"	"	.7155, 0°	Brauner. 192, 72.
"	"	.7078, 7°.8	
"	"	.7004, 15°	
Tributylamine	$N.(C_4H_9)_3$	.791, 0°	Lieben an A. C. P.
"	"	.7782, 20°	
"	"	.7677, 40°	
Triisobutylamine	"	.785, 21°	Sachtleben 734.
Amylamine	$NH_2.C_5H_{11}$	.7503, 18°	Wurtz. J.
"	"	.815, 0°	Wurtz. J
"	"	.7517, 22°.5	Plimpton. 39, 33.
" Active	"	.7725, 0°	Plimpton. 39, 331.
" Inactive	"	.7678?, 0°	
"	"	.6848, 94°.8	Schiff. B
Dimethylethylcarbinolamine?	"	[illegible], 0°	Wurtz. J
"	"	[illegible], 0°	Rudneff. J 545.
		[illegible], 15°	
Diamylamine	$NH.(C_5H_{11})_2$	.7825?, 0°	Silva. Z. (
Active		[illegible], 0°	Plimpton. 39, 331.
Inactive		[illegible], 14°	
Triamylamine Active	$N.(C_5H_{11})_3$	[illegible], 18°	"
Inactive		[illegible], 18°	
Hexylamine	$NH_2.C_6H_{13}$	.768?, 17°	Pelouze Cahours.
Secondary hexylamine?		[illegible]	Uppenkamp 8, 57.
Heptylamine?	$NH_2.C_7H_{15}$?	[illegible]	Squire. J

3d. The Aniline Series.

Name.	Formula.	Sp. Gravity.	Authority.
…nzene, or aniline	$C_6H_5.H_2N$	1.020, 16°	Hofmann. A. C. P. 47, 50.
"	"	1.028	Fritzche. J. P. C. 20, 458.
"	"	1.0361, 0°	Kopp. A. C. P. 98, 367.
"	"	1.0251, 13°.7	
"	"	1.018, 15°.5	Städeler and Arndt. J. 17, 425.
"	"	1.024, 17°.5	Lucius.
"	"	1.026, 15°	Kern. Ber. 10, 199.
"	"	.8527, 183°	Ramsay. J. C. S. 35, 463.
"	"	1.0379, 0°	Thorpe. J. C. S. 37, 871.
"	"	.87274, 183°.7	
"	"	1.02478, 16°.3	Johst. P. A. (2), 20, 56.
"	"	1.0216, 20°	Brühl.
"	"	1.0131, 25°.7	Schall. Ber. 17, 2555.
"	"	.9484, 100°.9	
"	"	1.016, 13°	Gladstone. Bei. 9, 249.
"	"	1.0322, 7°.5	
"	"	.8751, 183°.1	Schiff. Bei. 9, 559.
"	"	.92256, 130°.9	Taken at different pressures, each t°. being the boiling point at the pressure observed. Neubeck. Z. P. C. 1, 655.
"	"	.91858, 135°.1	
"	"	.90708, 147°.2	
"	"	.90632, 148°	
"	"	.89272, 162°	
"	"	.89233, 162°.6	
"	"	.88077 } 178°.9	
"	"	.88097	
"	"	.87443, 181°.6	
"	"	.87424, 181°.8	
"	"	.87384 } 183°.1	
"	"	.87356	
"	"	1.0216, 20°	Knops. V. H. V. 1887, 17.
"	"	1.02204, 20°	Weegmann. Z. P. C. 2, 218.
…niline	$C_6H_5.CH_3.HN$	.976, 15°	Hofmann. Ber. 7, 526.
…nine	$C_6H_5.CH_2H_2N$	.990, 14°	Limpricht. J. 20, 510.
…idine	$C_6H_4.CH_3.H_2N$	1.0002, 16°.3	Rosenstiehl. J. 21, 745.
	"	1.008, 20°.2	Three preparations. Beilstein and Kuhlberg. Z. C. 12, 523.
	"	1.002, 22°	
	"	.998, 25°.5	
	"	1.046	Rüdorff. Ber. 12, 251.
	"	.8302, 197°	Ramsay. J. C. S. 35, 463.
	"	.9986, 20°	Brühl. Bei. 4, 780.
	"	1.0038, 15°	Hirsch. Ber. 18, 1511.

NAME.	FORMULA.	SP. GRAVITY.	AUTHO[R]
Orthotoluidine	$C_6H_4.CH_3.H_2N$	.89397, 142°.7	Taken at pressure t°. being ing poi[nt] pressu[re] served beck. Z 657.
"	"	.89292, 143°.2	
"	"	.87527, 163°.2	
"	"	.87456, 163°.9	
"	"	.86064 } 178°.4	
"	"	.86078 } 178°.4	
"	"	.85214 } 186°.9	
"	"	.85185 } 186°.9	
"	"	.84453, 198°	
"	"	.84348 } 199°	
"	"	.84320 } 199°	
Metatoluidine	"	.998, 25°	Lorenz. C 166.
"	"	.88528 } 149°	Taken at pressure t°. being ing poi[nt] pressu[re] served beck. Z 658.
"	"	.88561 } 149°	
"	"	.86525, 169°	
"	"	.86283, 171°	
"	"	.85231, 184°	
"	"	.85121, 185°	
"	"	.84369, 191°	
"	"	.84293, 193°	
"	"	.83523 } 201°	
"	"	.83537 } 201°	
"	"	.83385 } 203°	
"	"	.83351 } 203°	
Paratoluidine	"	.88313, 143°	Taken at pressure t°. being ing poi[nt] pressu[re] served beck. Z 658.
"	"	.88269, 143°.2	
"	"	.86131 } 168°	
"	"	.86130 } 168°	
"	"	.85025, 178°.4	
"	"	.84858, 181°	
"	"	.83814 } 192°.6	
"	"	.83850 } 192°.6	
"	"	.83171 } 200°	
"	"	.83178 } 200°	
"	"	.8[illegible]65, 201°.5	
Dimethylaniline	$C_6H_5.(CH_3)_2N$	[illegible]	Hofmann. 27. 1.
"	"	[illegible]45, 15°	Kern. Ber.
"	"	[illegible]	Ramsay. 35. 463.
"	"	[illegible]	Brühl. 235, 1.
[illegible]	[illegible]	[illegible]	Hofmann.
[illegible]	[illegible]	[illegible]	Beilstein an[d] berg. A.(206.
		[illegible]	"
[illegible]	[illegible]	[illegible]	Monnet, and Nölti[ng] 11, 2278.
[illegible]	[illegible]	[illegible]	Wroblevsky 12, 1227.
		[illegible]	Jacobsen 102.
		[illegible]	Nölting Ber.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
1.3.4	$C_6 H_3 (C H_3)_2 H_2 N$	.985, 18°.5	Tawildarow. Z. C. 13, 418.
"	"	.9184, 25°	Hofmann. Ber. 9, 1295.
"	"	.86651 (159°.5)	Taken at different pressures, each t°. being the boiling point at the pressure observed. Neubeck. Z. P. C. 1, 662.
"	"	.86687 (159°.5)	"
"	"	.84874, 182°	"
"	"	.83478, 197°	"
"	"	.82374, 205°	"
"	"	.81633 (215°.5)	"
"	"	.81597 (215°.5)	"
"	"	.81454 (218°)	"
"	"	.81436 (218°)	"
1.3.5	"	.9935, 0°	Wroblevsky. Ber. 10, 1249.
"	"	.972, 15°	Nölting and Forel. Ber. 18, 2678.
1.4.2	"	.980, 15°	Nölting and Forel. Ber. 18, 2680.
	"	.9867, 19°	Gladstone. Bei. 9, 249.
ltoluidine. 1.2	$C_6H_4. CH_3. (CH_3)_2N$	.9324	Hofmann. C. N. 27, 1.
" 1.3	"	.9368	" "
" 1.4	"	.988	" "
iline	$C_6 H_5. C_3 H_7 H N$	.949, 18°	Pictet and Crépieux. Ber. 21, 1106.
nidine. 1.3	$C_6H_4. C H_3. C_2H_5H N$	.869, 20°	Wroblevsky. J. C. S. (2), 13, 455.
" 1.4	"	.9391, 15°.5	Morley and Abel. J. 4, 497.
ne	$C_6 H_4. C_3 H_7. H_2 N$	.8526	Nicholson. J. 1, 664.
umidine. 1.3.5.6	$C_6 H_2 (C H_3)_3 H_2 N$	.9633	Hofmann. C. N. 27, 1.
uiline	$C_6 H_5 (C_2 H_5)_2 N$	.939, 18°	Hofmann. J. 2, 399.
laniline	$C_6 H_5. C_4 H_9. H N$	.9262, 15°	Giannetti. Ber. 14, 1759.
	"	.940, 18°	Pictet and Crépieux. Ber. 21, 1106.
rlxylidine	$C_6H_3(CH_3)_2(C H_3)_2 N$	.9298	Hofmann. C. N. 27, 1.
thylaniline	$C_6 H (C H_3)_4 H_2 N$	.978, 24°	Hofmann. Ber. 17, 1912.
uiline	$C_6 H_5. C_5 H_{11} H N$	.928, 15°	Pictet and Crépieux. Ber. 21, 1106.
oluidine. 1.4	$C_6H_4. C H_3 (C_2 H_5)_2 N$	.9242, 15°.5	Morley and Abel. J. 7, 498.
lmesidine. 1.3.5.6	$C_6 H_2(C H_3)_3(C H_3)_2 N$	.9076	Hofmann. C. N. 27, 1.
sylaniline	$C_6 H_5. C_5 H_{11} C H_3 N$	.906, 20°	Claus and Rautenberg. Ber. 14, 622.
[illegible]iline	$C_6 H_5 (C_3 H_7)_2 N$	.9240, 0°	Zander. A. C. P. 214, 181.
[illegible]	"	.7267, 245°.4	Zander. A. C. P. 214, 181.
[illegible]aniline	"	.9338, 0°	" "
[illegible]	"	.7504, 221°	" "
[illegible]aniline	$C_6 (CH_3)_3 (C_2H_5)_2 H_2 N$	.971	Ruttan. Ber. 19, 2384.
	$H_4. C_3 H_5 H N$	.982, 25°	Schiff. J. 17, 415.

NAME.	FORMULA.	SP. GRAVITY.	AUTHOR
Diallylaniline	$C_6 H_5 (C_3 H_5)_2 N$	.9680, 0°	Zander. A. 181.
"	"	.7667, 244°	
Diphenylamine	$N H. (C_6 H_5)_2$	1.156 } 4°	Schröder. 561.
"	"	1.161 }	
"	"	.8293, 310°	Ramsay. J 463.
Methyldiphenylamine	$N. (C_6 H_5)_2 C H_3$	1.0476, 20°	Brühl. 235, 1.
Dibenzylamine	$N H. (C_7 H_7)_2$	1.033, 14°	Limpricht. 510.
Amidobenzylamine	$C_7 H_{10} N_2$	1.08, 20°	Amsel a[illegible] mann. 1288.
Metamidodimethylaniline	$C_8 H_{12} N_2$	.995, 25°	Groll. Be[illegible]

4th. The Pyridine Series.

NAME.	FORMULA.	SP. GRAVITY.	AUTHO
Pyridine	$C_5 H_5 N$	.9858, 0°	Anderson.
"	"	.924, 22°	Thenius.
"	"	.8617, 117°	Ramsay. J 463.
"	"	.9802, 0°	Richard. 198.
"	"	.8823 } 115°	Schiff. Be[illegible]
"	"	.8826 }	
"	"	1.0033, 0°	Ladenburg 289.
[illegible]	[illegible] N	.955, 10°	Anderson. 60, 93.
"	"	[illegible], 0°	Anderson.
"	"	[illegible]	Thenius.
"	"	[illegible], 134°	Ramsay. J 463.
"	"	[illegible]	Richard. 198.
[illegible]	[illegible]	[illegible]	Thorpe. 37, 371.
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	Gladstone. 249.
[illegible]	[illegible]	[illegible]	Lange. 3436.
[illegible]	[illegible]	[illegible]	Dürkop[illegible] Schlaug[illegible] 20, 1660.
[illegible]	[illegible]	[illegible]	Ladenburg 103, 692.
[illegible]	[illegible]	[illegible]	Heskiel. 2091.
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	Ladenburg 103, 692.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
γ Picoline	C_6H_7N	.9708, 0°	Lange. Ber. 18, 3486.
"	"	.9708, 0°	Ladenburg. C. R. 103, 692.
"	"	.9742, 0°	Ladenburg. Ber. 21, 287.
ι Lutidine	C_7H_9N	.928	Williams. J. 7, 494.
"	"	.9467, 0°	Anderson. J. 10, 397.
"	"	.945, 22°	Thenius. J. 14, 502.
"	"	.9467, 0°	Williams. J. 17, 437.
"	"	.7916, 154°	Ramsay. J. C. S. 35, 463.
"	"	.9377, 0°	Richard. Ber. 13, 198.
"	"	.9545, 0°	Ladenburg and Roth. Ber. 18, 52.
" α—γ	"	.9503, 0°	Ladenburg and Roth. Ber. 18, 913.
" α—α	"	.9424, 0°	Ladenburg. C. R. 103, 692.
Lutidine	"	.9555, 0°	Williams. J. 17, 437.
"	"	.9598, 0°	Coninck. C. R. 91, 296.
Ethylpyridine	"	.9495 } 0°	Ladenburg. Ber. 20, 1653.
"	"	.9498 } 0°	
Ethylpyridine	"	.9522, 0°	Ladenburg. Ber. 18, 2963.
"	"	.9358, 20°	
Collidine	$C_8H_{11}N$	.921	Anderson. J. 7, 490.
"	"	.9439, 0°	Anderson. J. 10, 397.
"	"	.953, 22°	Thenius. J. 14, 502.
"	"	.943	Wurtz. Ber. 12, 1710.
"	"	.7839, 173°	Ramsay. J. C. S. 35, 463.
"	"	.9291, 0°	Richard. Ber. 13, 198.
"	"	.917, 15°	Hantzsch. Ber. 15, 2914.
"	"	.9286, 16°.8	Weidel and Pick. S.W. A. 90, 972.
"	"	.9224, 15°	Mohler. Ber. 21, 1014.
Collidine	"	.9656, 0°	Coninck. C. R. 91, 296.
ldehyde collidine	"	.9389, 4°	Dürkopf. Ber. 18, 920.
Isopropylpyridine	"	.9342, 0°	Ladenburg. C. R. 103, 692.
Isopropylpyridine	"	.9408, 0°	Ladenburg and Schrader. Ber. 17, 1121.
"	"	.9439, 0°	Ladenburg. C. R. 103, 692.
Propylpyridine	"	.9393, 0°	
Propylpyridine	"	.9411, 0°	Two lots. Ladenburg. Ber. 17, 772.
"	"	.9306, 10°	
arvoline	$C_9H_{13}N$	.966, 22°	Thenius. J. 14, 502.
"	"	.916, 14°	Engelmann. J.C.S. 50, 259.

Name.	Formula.	Sp. Gravity.	Aut…
Parvoline	$C_9 H_{13} N$	.94185, 0°	Dürk… Schl… 21, 8…
"	"	.92894, 16°	
Coridine	$C_{10} H_{15} N$	.974, 22°	Thenius.
Rubidine	$C_{11} H_{17} N$	1.017, 22°	"
Viridine	$C_{12} H_{19} N$	1.024, 22°	"
Allyl pyridine	$C_8 H_9 N$	.9595, 0°	Ladenbu… 2578.
Piperidine. From piperine	$C_5 H_{11} N$	.8810, 0°	Laden… Roth.
" Synthetic	"	.8814, 4°	
"	"	.7791	Schiff. B…
"	"	.7801 105°	
"	"	.7810	
α Methylpiperidine	$C_6 H_{13} N$	.8601, 0°	Laden… Roth.
"	"	.860, 0°	Ladenbu… 103, 74…
β Methylpiperidine	"	.8686, 4°	Hesekiel. 910.
"	"	.8684, 0°	Ladenbu… 103, 74…
α—α Dimethylpiperidine	$C_7 H_{15} N$	.8492, 4°	Laden… Roth.
α—γ Dimethylpiperidine	"	.8615, 0°	Ladenbu… 103, 74…
α Ethylpiperidine	"	.8674, 0°	Ladenbu… 2963.
γ Ethylpiperidine	"	.8759, 0°	Ladenbu… 2964.
Methyl-α-ethylpiperidine	$C_8 H_{17} N$	.8495, 0°	Ladenbu… 103, 74…
α Propylpiperidine. Coniin	"	.89	Geiger.
" "	"	.878	Blyth. J…
" "	"	.846, 12°.5	Petit. … 887.
" "	"	.886	Schorm. 1767.
" "	"	.913, 0°	Two p… Schiff. 166, 8…
" "	"	.899, 15°	
" "	"	.842, 90°	
" "	"	.886, 0°	
" "	"	.873, 15°	
" "	"	.811, 90°	
" "	"	.863	Ladenbu… 774.
" "	"	.875, 0°	Ladenbu… 772.
" "	"	.8626, 0°	Ladenbu… 2580.
β Propylpiperidine	"	.870, 0°	Ladenbu… 772.
α Isopropylpiperidine	"	.8680, 0°	Ladenbu… [illegible]
"	"	.8676, 0°	Ladenbu… 103, 74…

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Methyl-a γ-isopropylpiperidine.	$C_9 H_{19} N$	.8593, 0°	Ladenburg. C. R. 103, 747.
Copellidine	$C_8 H_{17} N$	.8658, 0°	Dürkopf. Ber. 18, 920.
"	"	.8546, 15°	
Methylcopellidine	$C_9 H_{19} N$	.8519, 0°	" "
"	"	.8440, 18°	
Dimethylcopellidine	$C_{10} H_{21} N$	.7816, 25°	" "
a Pipecoleine	$C_6 H_{11} N$	.8801, 0°	Ladenburg. Ber. 20, 1646.
γ Pipecoline	$C_6 H_{13} N$	.8674, 0°	Ladenburg. Ber. 21, 288.
a Isopropylpiperideine	$C_8 H_{15} N$	.8956, 0°	Ladenburg. Ber. 20, 1647.
Hydrolutidine. a—γ	$C_7 H_{13} N$	.8615, 0°	Ladenburg and Roth. Ber. 18, 919.
Hydrotropidine	$C_8 H_{15} N$	.9366, 0°	Ladenburg. Ber. 16, 1409.
"	"	.9259, 15°	
a Coniceine	"	.893, 15°	Hofmann. Ber. 18, 10.
Paradiconiine	$C_{16} H_{27} N$	.915, 15°	Schiff. A. C. P. 166, 88.
Quinoline or chinoline	$C_9 H_7 N$	1.081, 10°	Hofmann. A. C. P. 47, 79.
" "	"	1.1081, 0°	Skraup. Ber. 14, 1002.
" "	"	1.0947, 20°	
" "	"	1.0699, 50°	
" "	"	1.1055, 0°	Coninck. J. C. S. 44, 89.
" "	"	1.0965, 11°.5	
" "	"	1.096 } 10°	Gladstone. Ber. 9, 249.
" "	"	1.1021 } 10°	
" "	"	.9211, 234°	Schiff. Ber. 19, 560.
Lepidine	$C_{10} H_9 N$	1.072, 15°	Williams. J. 9, 536.
Orthomethylquinoline	"	1.0852, 0°	Skraup. Ber. 14, 1002.
"	"	1.0734, 20°	
"	"	1.0586, 50°	
Metamethylquinoline	"	1.0839, 0°	Skraup. Ber. 15, 2255.
"	"	1.0722, 20°	
"	"	1.0576, 50°	
Paramethylquinoline	"	1.0815, 0°	Skraup. Ber. 14, 1002.
"	"	1.0671, 20°	
"	"	1.0560, 50°	
Dimethylquinoline	$C_{11} H_{11} N$	1.0752, 4°	Berend. Ber. 18, 3165.
" a—γ	"	1.0611, 15°	Beyer. J. P. C. (2), 33, 402.
Metadipyridyl	$C_{10} H_8 N_2$	1.1757, 0°	Skraup and Vortmann. M. C. 4, 593.
"	"	1.1635, 20°	
"	"	1.1493, 50°	
Isodipyridine	$C_{10} H_{10} N_2$	1.08	Ramsay. P. M. (5), 6, 29.
"	"	1.1245, 18°	Cahours and Etard. Ber. 18, 777.
Dipicoline	$C_{12} H_{14} N_2$	1.12	Ramsay. P. M. (5), 6, 31.
"	"	1.077	Anderson.

Name.	Formula.	Sp. Gravity.	Auth
Nicotine	$C_{10} H_{14} N_2$	1.033, 4°	
"	"	1.027, 15°	
"	"	1.018, 30°	Barral.
"	"	1.0006, 50°	
"	"	.9424, 101°.5	
"	"	1.01837, 10°.2	
"	"	1.01101, 20°	Landolt
"	"	1.00873, 30°	189, 2
"	"	1.0111, 15°	Skalweit. 1809.
Hydronicotine	$C_{10} H_{16} N_2$	.993, 17°	Etard. 1218.
Dipiperidyl	$C_{10} H_{20} N_2$	.9561, 4°	Liebrecht 2591.
α Stilbazoline	$C_{13} H_{19} N$	.9874, 0°	Baurath. 818.
Dihydro-α-stilbazol	$C_{13} H_{13} N$	1.0465, 0°	"

5th. Miscellaneous Compounds.

Name.	Formula.	Sp. Gravity.	Auth
Dimethyl hydrazin	$C_2 H_8 N_2$	.801, 11°	Renouf. 2171.
Ethylene diamine	$C_2 H_4 (N H_2)_2$	.902	Rhoussop Meyer. 42, 940.
Propylene diamine	$C_3 H_6 (N H_2)_2$	.878, 15°	Hofmann. 810.
Pentamethylene diamine	$C_5 H_{10} (N H_2)_2$	.9174, 0°	Ladenbur 2957.
β Methyltetramethylene diamine.	"	.8886, 20°	Oldach. 1655.
Ethylene cyanide	$C_2 H_4 (C N)_2$	1.023, 45°	Simpson.
Pyrotartronitril	$C_3 H_6 (C N)_2$	.9961, 11°	Henry. 330.
Crotonitril	$C_4 H_5 N$	.8389, 12°	Will and
"	"	.8491, 0°	Rinne and
"	"	.8351, 15°	A. C. P.
Allyl carbamine	$C_3 H_5 . C N$	.812, 0°	Lieke.
" "	"	.794, 17°	112, 318.
Allylamine	$C_3 H_5 . H_2 N$	.864, 15°	Oeser. J.
"	"	.7754, 10°.5	
"	"	.7775, 11°	
"	"	.7698, 17°.5	Four[illegible]
"	"	.7684, 19°	[illegible]
"	"	.7261, 56°	[illegible]
Triallylamine	$(C_3 H_5)_3 N$	.8206, 0°	[illegible]
"	"	.6826, 155°.5	
Propylallylamine	$C_3 H_7 . C_3 H_5 . H N$	.7708, 18°	
Isoamylallylamine	$C_5 H_{11} . C_3 H_5 . H N$	.7777, 1[illegible]	

Name.	Formula.	Sp. Gravity.	Authority.
	C_4H_5N	1.077	Anderson. J. 10, 399.
	"	.7276, 133°	Ramsay. J. C. S. 35, 463.
	"	.9752, 12°.5	Weidel and Ciamician. Ber. 13, 71.
	"	.9606	Gladstone. Bei. 9, 249.
rol	C_5H_7N	.9203, 10°	Bell. Ber. 10, 1866.
ol	C_6H_9N	.8881, 16°	Bell. Ber. 9, 936.
	"	.9042, 10°	Bell. Ber. 10, 1862.
ol	$C_9H_{15}N$	.8786, 10°	Bell. Ber. 10, 866.
	C_4H_9N	.879, 0°	Petersen. Ber. 21, 290.
	"	.871, 10°	
rolidin	$C_5H_{11}N$	.8654, 0°	Oldach. Ber. 20, 1155.
nylpyrazol	$C_{10}H_{10}N_2$	1.085, 15°	Claisen and Stylos. Ber. 21, 1143 and 1147.
	"	1.081, 15°	
ylpyrazol	$C_{11}H_{12}N_2$	1.064, 15°	Claisen and Stylos. Ber. 21, 1148.
nylpyrazol	$C_{12}H_{14}N_2$	1.0435, 15°	" "
e	$C_6H_8N_2$	1.038, 0°	Tanret. B. S. C. 44, 104.
e	$C_7H_{10}N_2$	1.012, 0°	" "
	"	.9826, 12°	Morin. Ber. 21, ref. 188.
oxalin	$C_4H_6N_2$	1.0363	Wallach and Schulze. Ber. 14, 424.
	"	1.0359, 23°	Goldschmidt. Ber. 14, 1846.
xalin	$C_5H_8N_2$	.999	Wallach. Ber. 16, 535.
lethylin	"	1.0051, 11°	Radziszewski. Ber. 16, 487.
oxalin	$C_6H_{10}N_2$	.967, 16°	Wallach. Ber. 15, 650.
thylin	"	.9820	Wallach and Stricker. Ber. 13, 512.
	"	.980	Radziszewski. Ber. 16, 487.
ropylin	$C_7H_{12}N_2$	.9813	" "
ethylin	"	.9641	" "
propylin	$C_8H_{14}N_2$	.9520	Wallach and Schulze. Ber. 14, 424.
	"	.951	Radziszewski. Ber. 16, 487.
alin	"	.940, 18°	Wallach. Ber. 15, 651.
amylin	$C_9H_{16}N_2$	.9291, 19°.6	Radziszewski and Szul. Ber. 17, 1291.
[illegible]	$C_{10}H_{18}N_2$	.9149, 18°	" "
[illegible]	[illegible] N_2	.9048, 16°.1	" "
	N_2	.9029, 19°	" "

Name.	Formula.	Sp. Gravity.	Autho
Oxalmethyloenanthylin	$C_{10}H_{18}N_2$	.9282, 16°.5	Karcz. Be 474
Oxalethyloenanthylin	$C_{11}H_{20}N_2$	.9210, 16°.5	"
Oxalpropyloenanthylin	$C_{12}H_{22}N_2$	.9192, 17°	"
Benzonitril	$C_6H_5.CN$	1.0073, 15°	Fehling. 49, 91.
"	"	1.0230, 0°	Kopp. A. 367.
"	"	1.0084, 16°.8	
"	"	.8330, 192°	Ramsay. J 463.
"	"	1.0052, 18°	Gladstone. 249.
Benzyl cyanide, or α toluic nitril.	$C_7H_7.CN$	1.0155, 8°	Radziszews 3, 198.
" " "	"	1.0146, 18°	Hofmann. 519.
Phenylpropionitril	$C_8H_9.CN$	1.0014, 18°	Hofmann. 520.
Orthoxylyl cyanide	"	1.0156, 22°	Radziszews Wispek. 1279.
Metaxylyl cyanide	"	1.0022, 22°	"
Paraxylyl cyanide	"	.9922, 22°	"
Cumonitril	$C_9H_{11}.CN$	.765, 14°	Hofmann.
Azobenzene	$C_{12}H_{10}N_2$	1.180, 4°	Schröder. 561.
"	"	1.196, 4°	
"	"	1.202, 4°	
"	"	1.223, 4°	
"	"	.8256, 293°	Ramsay. J 463.
Phenyl hydrazin	$C_6H_8N_2$	1.091, 21°	Fischer. 190, 82.
" "	"	1.097, 22°.7	Fischer. 236, 198.
Chinaldin	$C_{10}H_9N$	1.0646, 20°	Küsel. Ber.
Piperyl hydrazin	$C_5H_{12}N_2$	.9283, 14°.6	Knorr. A. 301.
Diethylaniline azylin	$C_{20}H_{28}N_4$	1.107, 15°, s.	Lippma Fleissner 1417.
Methyl indol	C_9H_9N	1.0707, 0°	Lipp. Ber.
Cyanoconicine	$C_9H_{14}N_2$	.93	E. v. Meyer 39, 124.
Ptomaine	$C_8H_{11}N$	.9865, 0°	Coninck. 859.
"Acetylamine. ?"	C_2H_5N. ?	.975, 15°	Natanson.

XLVIII. COMPOUNDS CONTAINING C, H, N, AND O.

1st. Nitrites and Nitrates of the Paraffin Series.

Name.	Formula.	Sp. Gravity.	Authority.
nitrite	$CH_3.NO_2$	.991	Strecker. J. 7, 521.
itrite	$C_2H_5.NO_2$	.886, 4°	Dumas and Boullay. Ann. (2), 37, 19.
"	"	.947, 15°	Liebig. A. C. P. 30, 143.
"	"	.898	Mohr. J. 7, 561.
"	"	.900, 15°.5	Brown. J. 9, 575.
nitrite	$C_3H_7.NO_2$	.935, 21°	Cahours. Les Mondes, 32, 280.
yl nitrite	"	.856, 0°	Silva. Z. C. 12, 637.
"	"	.844, 24°	
l nitrite	$C_4H_9.NO_2$	.89445, 0°	Chapman and Smith. J. C. S. 22, 153.
"	"	.8771, 16°	
"	"	.82568, 50°	
ylcarbyl nitrite	"	.8915, 0°	Bertoni. Ber. 19, ref. 98.
itrite	$C_5H_{11}.NO_2$	.8773	Rieckher. J. 1, 699.
"	"	.9020	Hilger. Am. Ch. 5, 231.
"	"	.9026	
"	"	.8734, 21°	Gladstone. Bei. 9, 249.
ylethylcarbyl ni-	"	.9033, 0°	Bertoni. G. C. I. 16, 512.
itrite	$C_8H_{17}.NO_2$	.862, 17°	Eichler. Ber. 12, 1887.
hexylcarbyl nitrite	"	.881, 0°	Bertoni. G. C. I. 16, 512.
l nitrate	$CH_3.NO_3$	1.182, 20°	Dumas and Peligot. Ann. (2), 58, 39.
itrate	$C_2H_5.NO_3$	1.112, 17°	Millon. Ann. (3), 8, 236.
"	"	1.1322, 0°	Kopp. A. C. P. 98, 367.
"	"	1.1123, 15°.5	
"	"	1.0948, 17°	Wittstein. J. 18, 470.
"	"	.9991, 87°	Ramsay. J. C. S. 35, 463.
"	"	1.1067, 25°	Gladstone. Bei. 9, 249.
l nitrate	$C_3H_7.NO_3$	1.054, 0°	Silva. Z. C. 12, 637.
"	"	1.036, 19°	
nitrate	$C_4H_9.NO_3$	1.0384, 0°	Chapman and Smith. J. C. S. 22, 153.
"	"	1.020, 16°	
trate	$C_5H_{11}.NO_3$	.902, 22°	Rieckher. J. 1, 699.
"	"	.994, 10°	Hofmann. J. 1, 699.
"	"	1.000, 7°—8°	Chapman and Smith. J. 20, 550.
"	"	.8698, 147°	Schiff. Bei. 9, 559.
[illegible]	$C_{16}H_{33}.NO_3$	.91	Champion. C. R. 73, 571.

2d. Nitro-Derivatives of the Paraffin Series.

Name.	Formula.	Sp. Gravity.	Autho
Nitromethane	$C H_3 N O_2$	1.0236, 101°.5	Schiff. B
Nitroethane	$C_2 H_5 N O_2$	1.0582, 13°	Meyer an Ann. (4
"	"	.9329, 114°.5	Schiff. Be
"	"	1.0550, 18°	Gladstone. 249.
Nitroheptane	$C_7 H_{15} N O_2$	.9369, 19°	Beilstein a batow. 2029.
Dinitroethane	$C_2 H_4 (N O_2)_2$	1.3503, 23°.5	Meer. Be
Dinitropropane	$C_3 H_6 (N O_2)_2$	1.258, 22°.5	Meer. Be
Dinitrobutane	$C_4 H_8 (N O_2)_2$	1.205, 15°	Chancel. 1495.
Dinitrohexane	$C_6 H_{12} (N O_2)_2$	1.1381, 0°	Chancel. 601.
"	"	1.1333, 5°	
"	"	1.1284, 10°	
"	"	1.1235, 15°	
"	"	1.1185, 20°	
"	"	1.1135, 25°	
"	"	1.1085, 30°	
"	"	1.1034, 35°	
"	"	1.0983, 40°	
Ethyl nitroacetate	$C_4 H_7 N O_4$	1.133, 0°	Forcrand. 975.
Nitrocaprylic acid	$C_8 H_{15} N O_4$	1.093, 18°	Wirz. A. 289.
Ethyl nitrocaprylate	$C_{10} H_{19} N O_4$	1.031, 18°	Wirz. A. 290.
Nitrosodiethyline	$C_4 H_{10} N_2 O$	.951, 17°.5	Geuther.
Nitrosodipropylamine	$C_6 H_{14} N_2 O$	.924, 14°	Siersch.
"	"	.931, 0°	Vincent. ref. 680.
Derivative of nitroethane	$C_5 H_7 N O$	1.0102, 15°	Götting. 243, 104
" "	$C_6 H_9 N O$	.9750, 15°	"
" "	"	1.0	Ssokolow. ref. 540.

3d. Aromatic Nitro-Compounds.

Name.	Formula.	Sp. Gravity.	Authority.
›benzene	$C_6H_5.NO_2$	1.209, 15°	Mitscherlich. P.A. 31, 625.
"	"	1.2002, 0°	Kopp. A.C.P. 98, 367.
"	"	1.1866, 14°.4	
"	"	1.2159, 5°–10°	Regnault. P. A. 62, 50.
"	"	1.2107, 10°–15°	
"	"	1.2504, 15°–20°	
"	"	1.206, 20°	Naumann. Ber. 10, 2015.
"	"	1.0210, 220°	Ramsay. J. C. S. 35, 463.
"	"	1.2039, 20°	Brühl. Bei. 4, 780.
"	"	1.1740, 25°.5	Schall. Ber. 17, 2555.
"	"	1.0851, 116°.2	
"	"	1.2121, 7°.5	Gladstone. Bei. 9, 249.
"	"	1.07134, 150°.7	Taken at different pressures, each t°. being the boiling point at the pressure observed. Neubeck. Z. P. C. 1, 655.
"	"	1.07033, 153°.3	
"	"	1.06276, 158°.4	
"	"	1.04807, 173°.2	
"	"	1.04477, 186°.6	
"	"	1.03246, 189°.4	
"	"	1.03059, 189°.4	
"	"	1.01794, 200°.1	
"	"	1.00846, 207°.3	
"	"	1.00722, 208°.2	
"	"	1.00713, 208°.2	
›nitrobenzene	$C_6H_4(NO_2)_2$	1.3690, 98°.1	Schiff. A.C.P. 223, 247.
›trotoluene	$C_6H_4.CH_3.NO_2$	1.18, 16°.5	Deville. Ann. (3), 3, 175.
"	"	1.1231, 54°	Schiff. A.C.P. 223, 247.
"	"	1.1649, 15°.5	Gladstone. Bei. 9, 249.
›honitrotoluene	"	1.162, 23°	Beilstein and Kuhlberg. A.C. P. 155, 17.
"	"	1.163, 23°.5	
"	"	1.159	Leeds. Ber. 14, 483.
"	"	1.02509 } 160°	Taken at different pressures, each t°. being the boiling point at the pressure observed. Neubeck. Z. P. C. 1, 655.
"	"	1.02483 } 160°	
"	"	.99814, 186°.1	
"	"	.99679, 187°.1	
"	"	.98403 } 197°.7	
"	"	.98388 } 197°.7	
"	"	.97149, 208°.7	
"	"	.97087, 209°.2	
"	"	.96192 } 218°	
"	"	.96177 } 218°	
"	"	.96063 } 219°.8	
"	"	.96032 } 219°.8	
	"	1.168, 22°	Beilstein and Kuhlberg. J. 22, 408.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORI
Metanitrotoluene	$C_6H_4.CH_3.NO_2$	1.01158 } 171°	
"	"	1.01128	
"	"	.98775 } 194°.1	Taken at di
"	"	.98737	pressures,
"	"	.97227 } 207°.8	t°. bein
"	"	.97189	boiling p
"	"	.96027 } 218°.8	the pressu
"	"	.96008	served.
"	"	.95099 } 227°	beck. Z. I
"	"	.95084	655.
"	"	.94984, 227°.5	
"	"	.94938 } 228°.5	
"	"	.94914	
Paranitrotoluene	"	1.00668, 177°.5	Taken at di
"	"	1.00467, 178°.5	pressures,
"	"	.98378 } 201°	t°. bein
"	"	.98864	boiling p
"	"	.96812, 218°	the pressu
"	"	.95455, 225°	served.
"	"	.94531 } 237°.5	beck. Z. I
"	"	.94518	655.
"	"	.94342, 239°	
Dinitrotoluene	$C_6H_3.CH_3(NO_2)_2$	1.3208, 70°.5	Schiff. A.C. 247.
Nitroörthoxylene	$C_6H_3(CH_3)_2NO_2$	1.139, 20°	Jacobsen. B 160.
"	"	1.147, 15°	Noelting and Ber. 18, 26
Nitrometaxylene. 1.3.2	"	1.126, 17°.5	Towildarow. 13, 418
" "	"	1.126, 24°.5	Beilstein and berg.
" "	"	1.112, 15°	Grevingk. 2430.
" 1.3.4	"	1.124, 25°	Beilstein and berg.
" "	"	1.135, 15°	Grevingk. 2429.
" "	"	.98667, 176°	
" "	"	.98254, 179°.5	
" "	"	.98057, 182°	Taken at d
" "	"	.97535, 186°	pressures
" "	"	.95631 } 206°	t°. bei
" "	"	.95642	boiling
" "	"	.94078, 218°	the pres
" "	"	.92964 } 233°	served.
" "	"	.92945	beck. Z.
" "	"	.91794 } 243°	655.
" "	"	.91823	
" "	"	.91634, 244°	
Nitroparaxylene	"	1.132, 15°	Noelting an Ber. 18, 2
Nitrocymene	$C_{10}H_{13}.NO_2$	1.0385, 18°	Landolph. 596.
Dinitrocymene	$C_{10}H_{12}.(NO_2)_2$	1.206, 18°.5	"
"	"	1.204, 21°	
Nitronaphthalene	$C_{10}H_7.NO_2$	1.321 } 4°	Sch[illegible]
"	"	1.341	1[illegible]

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
›hthɔlene	$C_{10} H_7 . N O_2$	1.2226, 61°.5	Schiff. A. C. P. 223, 247.
rophenol	$C_6 H_4 . O H. N O_2$	1.448 } 4°	Schröder. Ber. 12, 561.
	"	1.451 } 4°	
	"	1.2945, 45°.2	Schiff. A. C. P. 223, 247.
ophenol	"	1.467 } 4°	Schröder. Ber. 12, 561.
	"	1.469 } 4°	
	"	1.2809, 114°	Schiff. A. C. P. 223, 247.
phenol, or picric	$C_6 H_2 . O H. (N O_2)_3$	1.813	Rüdorff. Ber. 12, 251.
"	"	1.750 } 4°	Schröder. Ber. 12, 561.
"	"	1.777 } 4°	
›rthonitrophenate	$C_6 H_4 . O C H_3 . N O_2$	1.268, 20°	Post and Mehrtens. Ber. 8, 1552.
paranitrophenate	"	1.233, 20°	" "
ı dinitrophenate	$C_6 H_3 . O C H_3 . (NO_2)_2$	1.341, 20°	" "
3 dinitrophenate	"	1.319, 20°	" "
:rinitrophenate	$C_6 H_2 . O C H_3 . (NO_2)_3$	1.408, 20°	" "
robenzoic acid	$C_6 H_4 . C O O H. N O_2$	1.5588	Post and Frerichs. Ber. 8, 1549.
" "	"	1.574 } 4°	Schröder. Ber. 12, 1611.
" "	"	1.576 } 4°	
obenzoic acid	"	1.4721	Post and Frerichs. Ber. 8, 1549.
" "	"	1.492 } 4°	Schröder. Ber. 12, 1611.
" "	"	1.496 } 4°	
obenzoic acid	"	1.5804	Post and Frerichs. Ber. 8, 1549.
sol	$C_6 H_4 . O C H_3 . N O_2$	1.249, 26°	Brunck. J. 20, 619.
roisobutylanisol	$C_6 H_4 . O C_4 H_9 . N O_2$	1.1046, 20°	Riess. Z. C. 14, 89.
›isobutylanisol	"	1.1861, 20°	" "
aniline	$C_6 H_4 . H_2 N. N O_2$	1.430, 4°	Schröder. Ber. 12, 561.
ıniline	"	1.415 } 4°	" "
	"	1.433 } 4°	

4th. Miscellaneous Nitrates, Nitrites, and Nitro-Compou

NAME.	FORMULA.	SP. GRAVITY.	AUTH
Allyl nitrite	$C_3 H_5 . N O_2$	.9546, 0°	Bertoni. (868.
Allyl nitrate	$C_3 H_5 . N O_3$	1.09, 10°	Henry.] 232.
Ethylene nitrosonitrate	$C_2 H_4 . N O_2 . N O_3$	1.472	Kekulé.]
Ethylene mononitrate	$C_2 H_4 . O H. N O_3$	1.31, 11°	Henry. A 243.
Ethylene dinitrate	$C_2 H_4 (N O_3)_2$	1.4837, 8°	"
" "	"	1.48	Champion 470.
a Propylene dinitrite	$C_3 H_6 (N O_2)_2$	1.144, 0°	Bertoni. (512.
Propylene dinitrate	$C_3 H_6 (N O_3)_2$	1.335, 5°	Henry. A 243.
Ethylene acetonitrate	$C_2 H_4 . C_2 H_3 O_2 . N O_3$	1.29, 18°	"
Glyceryl trinitrite	$C_3 H_5 (N O_2)_3$	1.291, 15°.5	Masson. 1690.
Nitrolactic acid	$C_3 H_5 N O_5$	1.35, 12°.8	Henry. A 415.
Ethyl nitroglycollate	$C_4 H_7 N O_5$	1.2112, 15°.2	"
Ethyl nitrolactate	$C_5 H_9 N O_5$	1.1534, 13°	"
Ethyl nitromalonate	$C_7 H_{11} N O_5$	1.149, 15°	Conradan Ber. 13,
Ethyl nitrotartronate	$C_7 H_{11} N O_7$	1.2778, 16°	Henry. A 415.
Ethyl nitromalate	$C_8 H_{13} N O_7$	1.2094, 16°	"
Nitroglycerine	$C_3 H_5 N_3 O_9$	1.595 } 1.600 } 15°	De Vrij.
"	"	1.5958	Liebe. J.
"	"	1.60	Sobrero.
"	"	1.60	Champion. 350.
"	"	1.6, 15°	Kern. C.
"	"	1.735, [illegible]	Beckerhim C. 4, 148
"	"	1.599, 1[illegible]	
"	"	1.602, 14°.5	Hay and J. C. S.
Nitromannite	$C_6 H_8 N_6 O_{18}$	1.[illegible]4, 0°, cryst	Sokoloff. 698.
"	"	1.44[illegible]	
"	"	1.[illegible] fused	
"	"	1.[illegible]	
Trinitrolactose	$C_{12} H_{19} N_3 O_{17}$	1.47[illegible] 0°	Gé. Ber.
Pentanitrolactose	$C_{12} H_{17} N_5 O_{21}$	1.[illegible]4, 0°	"
Acetonitrose	$C_{14} H_{19} N O_{12}$	1.[illegible]48[illegible] 18°	Colley. B. 406.
Acetoethyl nitrate	$C_6 H_{11} N O_5$	[illegible]	Nadler. J.
Derivative of menthol	$C_{10} H_{19} N O_2$	[illegible]	Moriya. J. 77.

5th. Miscellaneous Amido-Compounds.

ME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
ylamine	N H. O H. C_2 H_5	.8827, 7°.5	Gürke. Ber. 14, 258.
nine hydrate	$(N H_2)_2$ C_2 H_4. H_2 O	.970, 15°	Rhoussopolos and Meyer. J. C. S. 42, 940.
ropylamine	N H. C_3 H_7. C_3 H_6 O H	.9018, 18°	Liebermann and Paal. Ber. 16, 523.
mine	N H_2. C_5 H_{11} O	.9265, 14°	Radziszewski and Schramm. Ber. 17, 838.
ylamine	N H. $(C_5 H_{11} O)_2$	.9500, 14°	" "
amine	N $(C_5 H_{11} O)_3$	.879, 22°	J. Erdmann. J. 17, 419.
	N H_2. C O H	1.1462, 19°	Gladstone. Bei. 9, 249.
amide	N H. C H_3. C O H	1.011, 19°	Linnemann. J. 22, 601.
mide	N H. C_2 H_5. C O H	.967, 2°	Wurtz. J. 7, 567.
	"	.952, 21°	Linnemann. J. 22, 602.
amide	N $(C_2 H_5)_2$. C O H	.908, 19°	" "
	N H_2. C_2 H_3 O	1.11 } 14°	Mendius. B. D. Z.
	"	1.13 } 14°	
	"	1.159, 4°	Schröder. Ber. 12, 561.
ide	N H. C_2 H_5. C_2 H_3 O	.942, 4°.5	Wurtz. J. 7, 566.
amide	N. C_2 H_5. $(C_2 H_3 O)_2$	1.0092, 20°	Wurtz. Ann. (2), 42, 55.
etamide	N $(C H_3)_2$. C_2 H_3 O	.9405, 20°	Franchimont. R. T. C. 2, 329.
amide	N. $(C_2 H_5)_2$. C_2 H_3 O	.9248, 8°.5	Wallach and Kamensky. A. C. P. 214, 235.
de	N H_2. C_3 H_5 O	1.030 } 4°	Schröder. Ber. 12, 561.
	"	1.037 } 4°	
: acid, or gly-	C_2 H_5 N O_2	1.1607	Curtius. B. S. C. 39, 169.
ylglycocollate	C_8 H_{17} N O_2	.919, 15°	Kraut. J. R. C. 4, 198.
ic acid, or leu-	C_6 H_{13} N O_2	1.293, 18°	Engel and Vilmain. B. S. C. 24, 279.
" "	"	1.282	Lippmann. Ber. 17, 2837.
	C_2 H_4 N_2 O_4	1.627 } 4°	Schröder. Ber. 12, 561.
	"	1.657 } 4°	
	"	1.667 } 4°	
amide	C_4 H_8 N_2 O_2	1.281 } 4°	Schröder. Ber. 12, 1611.
	"	1.307 } 4°	
ide	C_6 H_{12} N_2 O_2	1.164 } 4°	" "
	"	1.178 } 4°	
	C_4 H_8 N_2 O_3. H_2 O	1.519, 14°	Watts' Dictionary.
	"	1.552	Rüdorff. Ber. 12, 252.
... aspartic	C_4 H_7 N O_4	1.6613, active	Pasteur. J. 4, 389.
	"	1.6632, inactive	

NAME.	FORMULA.	SP. GRAVITY.	AUTH
Allylsuccinimide	$C_7 H_9 N O_2$	1.1543, 0°	Moiné. 489.
"	"	1.1432, 12°	
"	"	1.1112, 50°	
"	"	1.0677, 100°	
Ethyl amidoacetacetate	$C_6 H_{11} N O_3$	1.014, 30°	Duisberg. 1386.
Ethylamidopropiopropionate.	$C_8 H_{15} N O_2$	.9774, 15°	Israel. A 197.
Mucamide	$C_6 H_{12} N_2 O_6$	1.589, 13°.5	Malaguti. 854.
Benzamide	$N H_2 . C_7 H_5 O$	1.338 } 4°	Schröder. 1611.
"	"	1.344	
Amidobenzoic acid	$N H_2 . C_7 H_5 O_2$	1.506 } 4°	"
" "	"	1.515	
Amidomethylphenol	$C_7 H_9 N O$	1.108, 26°	Brunck.
Dimethylanisidine	$C_9 H_{13} N O$	1.016, 23°	Mühlhäus P. 207,
Ethyl orthoamidophenetol	$C_{10} H_{15} N O$	1.021, 18°.3	Förster. J 21, 347.
Methylformanilide	$C_8 H_9 N O$	1.097, 18°	Pictet and Ber. 21,
Ethylformanilide	$C_9 H_{11} N O$	1.063, 16°	"
Propylformanilide	$C_{10} H_{13} N O$	1.044, 16°	"
Isoamylformanilide	$C_{12} H_{17} N O$	1.004, 16°	"
Acetanilide	$C_8 H_9 N O$	1.099, 10°.5	Williams.
"	"	1.205 } 4°	Schröder. 1611.
"	"	1.216	
Benzanilide	$C_{13} H_{11} N O$	1.306 } 4°	"
"	"	1.321	
Oxethenaniline	$C_8 H_{11} N O$	1.11, 0°	Demole. J 12, 77.
α Ethylbenzhydroxamic acid.	$C_9 H_{11} N O_2$	1.209	Gürke. Be
β Ethylbenzhydroxamic acid.	"	1.185	Gürke. Be
Ethyl ethylbenzhydroxamate.	$C_{11} H_{15} N O_2$	1.0258, 17°	Gürke. Be
Ethyl α dibenzhydroxamate.	$C_{16} H_{15} N O_3$	1.2433, 18°.4	Gürke. Be
Ethyl β dibenzhydroxamate.	"	1.2395, 18°.4	"
Tyrosine	$C_9 H_{11} N O_3$	1.456	Siber. Ber.
Carbamide, or urea	$C H_4 N_2 O$	1.35	Proust.
" "	"	1.30, 12°	Bödeker.
" "	"	1.35	Schabus.
" "	"	1.323 } 4°	Schröder. 561.
" "	"	1.333	
Ethyl carbamide	$C_3 H_8 N_2 O$	1.209	Two sa Leckar C. (2),
" "	"	1.213, 18°	
Diethyl carbamide	$C_5 H_{12} N_2 O$	1.040	Schröder. 1070.
" "	"	1.043	
Benzyl phenyl carbamide	$C_{14} H_{14} N_2 O$	.9168, 18°	Gladstone. 249.
Ethyl carbamate, or urethane.	$C_3 H_7 N O_2$	.9862, 21°	Wurtz. J

6th. Miscellaneous Cyanogen Compounds.

ME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
e	$C_2H_5.CNO$	1.1271, 15°	Cloëz. J. 10, 386.
l cyanate	$C_4H_9.CNO$	.8676, 0°	Brauner. Ber. 12, 1875.
e	C_2H_5OCN	.881, 15°	Chautard. C. R. 106, 1168.
rmate	$C_4H_5NO_2$	1.0139, 13°.5	Henry. C. R. 102, 768.
cetate	$C_5H_7NO_2$	1.0664, 13°.5	" "
dicyanide	$C_{10}H_{14}N_2O_2$	.96	Moritz. J. C. S. 40, 13.
nhydrin	$C_2H_4.OH.CN$	1.0588, 0°	Erlenmeyer. A. C. P. 191, 276.
cyanacetate	$C_7H_9NO_3$	1.102, 19°	Haller and Held. Ber. 15, 2363.
ylacetylcyan-	$C_8H_{11}NO_3$	.996, 20°	Held. B. S. C. 41, 330.
cetylcyanac-	$C_9H_{13}NO_3$	.976, 20°	" "
nitril	C_4H_7NO	.918, 6°	Henry. B. S. C. 20, 186.
	"	.9093, 20°	Norton and Tscherniak.
onitril	C_8H_7NO	1.09, 17°.5	Fritzsche. Ber. 12, 2178.
ril	"	1.124	Völckel. P. A. 62, 444.
leronitril	C_5H_9NO	.95612, 0°	Lipp. A. C. P. 205, 26.
ylonitril	$C_8H_{15}NO$	.9048, 17°	Erlenmeyer and Sigel. A. C. P. 177, 107.
tonitril	$C_8H_{15}NO_3$	1.0030, 15°.5	Bauer. A. C. P. 229, 163.
tril	$C_{13}H_{24}N_2O_3$	.79	Schlieper. A. C. P. 49, 19.
onitril	$C_4H_5NO_2$	1.1003, 13°.5	Henry. C. R. 102, 768.
ionitril	$C_5H_7NO_2$	1.077, 13°.5	" "
	$C_6H_{11}NO$	1.009	Rossignon. A. C. P. 44, 301.

7th. Miscellaneous Compounds.

Name.	Formula.	Sp. Gravity.	Auti
Ethyl carbimide	$C_3 H_5 N O$	.8981	Wurtz.
Phenyl carbimide	$C_7 H_5 N O$	1.092, 50°	Hofmann 19, 108
Ethylmethyl acetoxim	$C_4 H_9 N O$	.9195, 24°	Janny. B
Trimethylene diethylalkin	$C_7 H_{17} N O$	.9199, 4°	Berend. I
Tetrethylallylalkin	$C_{11} H_{26} N_2 O$	.9002, 4°	"
Methylphenylethylalkin	$C_9 H_{13} N O$	1.08065, 0°	Laun. B
Piperpropylalkin	$C_8 H_{17} N O$	.9456, 0°	Laun. B
Hydroxypicoline	$C_6 H_9 N O$	1.008, 18°	Etard. 1046.
Collidine monocarbonic ether.	$C_{11} H_{15} N O_2$	1.0815, 15°	R. Miche 225, 12
Collidine dicarbonic ether	$C_{14} H_{19} N O_4$	1.087, 15°	Hantzsch 2913.
Nitroxylpiperidine	$C_5 H_{10} N_2 O$	1.0659, 15°.5	Werthei 440.
Acetpiperidid	$C_7 H_{13} N O$	1.01106, 9°	Wallach mensky 214, 2
Acetylcopellidine	$C_{10} H_{19} N O$	.9787, 0°	Dürkopf. 924.
"	"	.9660, 21°	
Parachinanisol	$C_{10} H_9 N O$	1.1665, 0°	Skraup. ref. 681
"	"	1.1542, 20°	
"	"	1.1402, 50°	
Base from ethylamine camphorate.	$C_{14} H_{26} N_2 O$	1.0177, 15°	Wallach mensk 214, 24
Uric acid	$C_5 H_4 N_4 O_3$	1.855	Schröder. 1070.
" "	"	1.893	
Hippuric acid	$C_9 H_9 N O_3$	1.308, s.	Schabus.
Ethyl hippurate	$C_{11} H_{13} N O_3$	1.043, 23°, s.	Stenhous 31, 148
Ethyl glycocholate	[illegible]	.991	Springer. 181.
Indigotine	[illegible]	1.35	Weltzi sammei
[illegible]	[illegible]	1.44	Watts' D
"		1.45	
[illegible]	[illegible]	[illegible]	Pfaff. W
[illegible]	[illegible]	[illegible]	Wacke Watts'
[illegible]	[illegible]	[illegible]	F. W. Cl
		[illegible]	Blunt. 1047.
[illegible]	[illegible]	[illegible]	Schröder. 1070.
		[illegible]	
[illegible]	[illegible]	[illegible]	Decharm 445.
[illegible]	[illegible]	[illegible]	"
[illegible]	[illegible]	[illegible]	"
[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	
		[illegible]	

Name.	Formula.	Sp. Gravity.	Authority.
	$C_{19}H_{21}NO_3$	1.282	Schröder. Ber. 18, 1070.
	"	1.305	
ne	$C_{20}H_{25}NO_4$	1.255	" "
	"	1.256	
ine	$C_{21}H_{21}NO_4$	1.308	
	"	1.317	" "
	"	1.337	
ine	$C_{21}H_{23}NO_5$	1.351	" "
se	$C_{22}H_{23}NO_7$	1.374	
	"	1.391	" "
	"	1.395	
rine	$C_8H_{15}NO$	.988, 0°	Tanret. Ber. 18, 1031.
ic acid	$C_{13}H_{28}NO_5$	1.14, 15°	Champion and Pellet. B.S.C. 18, 247.

CHLORIDES, BROMIDES, AND IODIDES OF CARBON.

Name.	Formula.	Sp. Gravity.	Authority.
tetrachloride	CCl_4	1.599	Regnault. Ann. (2), 71, 388.
"	"	1.56	Kolbe. A. C. P. 54, 146.
"	"	1.62983, 0°	Pierre. Ann. (3), 33, 210.
"	"	1.567, 12°	Riche.
"	"	1.5947, 20°	Haagen. P. A. 131, 117.
"	"	1.4658, at the boiling p't.	Ramsay. J. C. S. 35, 463.
"	"	1.63195, 0°	Thorpe. J. C. S. 37, 199.
"	"	1.47999, 76°.74	
"	"	1.6084, 9°.5	Schiff. G. C. I. 13, 177.
"	"	1.4802, 75°.6	
"	"	1.60500, 15°	Perkin. J. P. C. (2), 32, 523.
"	"	1.58873, 25°	
lorethylene	C_2Cl_4	1.619, 20°	Regnault. Ann. (2), 71, 353.
"	"	1.6490, 0°	Pierre. Ann. (3), 33, 230.
"	"	1.612, 10°	Geuther. A. C. P. 107, 212.
"	"	1.6595, 0°	Bourgoin. Ber. 8, 548.
"	"	1.6190, 20°	Brühl. Bei. 4, 780.
"	"	1.6312, 9°.4	Schiff. G. C. I. 13, 177.
"	"	1.4484, 120°	
"	"	1.4489, 120°	
[illegible]	C_2Cl_6	1.619	Regnault. Ann. (2), 71, 374.
	"	2.011	Schröder. Ber. 13, 1070.

Name.	Formula.	Sp. Gravity.	Authori[ty]
Octochlorpropane	C_3Cl_8	1.860	Cahours. J.
Hexchlorobenzene	C_6Cl_6	1.585, 228°	Jungfleisch.
"	"	1.437, 317°	36.
"	"	1.569, 286°	M. 226°. B
"	"	1.5191, 266°	Jungfleisch
"	"	1.4624, 306°	354.
Thiocarbonyl chloride	$CSCl_2$	1.46	Kolbe. A. C 41.
" "	"	1.5498, 0°	
" "	"	1.5339, 11°	Claesson.
" "	"	1.5241, 17°	Arsskrift 1
" "	"	1.05085, 15°	Billeter and Ber. 21, 16
Carbon tetrabromide	CBr_4	3.42, 14°	Bolas and (J. C. S. 24,
Carbon sulphobromide	CS_2Br_4	2.88, 15°	Hell and U Ber. 16, 11
Bromo-trichlormethane	CCl_3Br	2.058, 0°	
" "	"	2.017, 19°.5	Paterno. J.P
" "	"	1.842, 100°	5, 99.
" "	"	2.05496, 0°	Thorpe. J.C
" "	"	1.82446, 104°.07	371.
Dibrom-tetrachlorethane	$C_2Cl_4Br_2$	2.3, 21°	Malaguti. A 16, 24.
Dibrom-hexchlorpropane	$C_3Cl_6Br_2$	1.974	Cahours.
Carbon tetriodide	CI_4	4.32, 20°.2	Gustavson. C 1126.

L. COMPOUNDS CONTAINING C, CL, AND O.

Name.	Formula.	Sp. Gravity.	Authori[ty]
[illegible]	[illegible]	[illegible]	Emmerling
		[illegible]	Lengyel. 13, 189.
[illegible]	[illegible]	[illegible]	Malaguti. A 16, 9.
		[illegible]	Thorpe. J.
		[illegible]	37, 371.
[illegible]	[illegible]	[illegible]	Anthoine. J. Ch. (5), 8, (
[illegible]	[illegible]	[illegible]	Cahours. J.
		[illegible]	Hentschel. J (2), 36, 99.
[illegible]	[illegible]	[illegible]	Cloez. Ann. (209.
[illegible]		[illegible]	Cloez. Ann. (312.
[illegible]	[illegible]	[illegible]	Leblanc. A 10, 202.
		[illegible]	Leblanc. 10, 201

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
methyl oxide	$C_2 Cl_6 O$	1.594	Regnault. Ann. (2), 71, 403.
ethyl oxide	$C_4 Cl_{10} O$	1.9, 14°.5	Malaguti. Ann. (3), 16, 14.
racetone	$C_3 Cl_6 O$	1.75, 10°	Plantamour.
	"	1.744, 12°	Cloëz. Ann. (6), 9, 145.
ethose	$C_4 Cl_6 O$	1.654, 21°	Malaguti. Ann. (3), 16, 20.
ive of sodium cit-	$C_5 Cl_{10} O_2$	1.66	Watts' Dictionary.
n of P Cl_5 on suc-chloride.	$C_4 Cl_6 O$	1.634	Kauder. J. P. C. (2), 28, 191.

LI. COMPOUNDS CONTAINING C, H, AND CL.

1st. Chlorides of the Paraffin Series.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
l chloride	$C H_3 Cl$	.99145, 25°.7	
"	"	.95231, 0°	
"	"	.92880, 13°.4	
"	"	.91969, 17°.9	Vincent and Delachanal. Bei. 3, 332.
"	"	.90875, 23°.8	
"	"	.89638, 30°.2	
"	"	.97886, 39°	
chloride	$C_2 H_5 Cl$	.874, 5°	Thénard.
"	"	.92138, 0°	Pierre. C. R. 27, 213.
"	"	.9253, 0°	Darling. J. 21, 328.
"	"	.9176, 8°	Linnemann. A.C.P. 160, 195.
"	"	.8510, 12°	Ramsay. J. C. S. 35, 468.
"	"	.92295, 15°	Perkin. J. P. C. (2), 31, 481.
"	"	.91708, 25°	
chloride	$C_3 H_7 Cl$	.9156, 0°	
"	"	.8918, 19°.75	Pierre and Puchot. Ann. (4), 22, 281.
"	"	.8671, 39°	
"	"	.9160, 18°	Linnemann. A.C.P. 161, 38 and 39.
"	"	.8959, 19°	
"	"	.8877, 14°	De Heen. Bei. 5, 105.
"	"	.9123, 0°	Zander. A.C.P. 214, 181.
"	"	.8536, 46°.5	
"	"	.8561, 46°	Schiff. G. C. I. 13, 177.
"	"	.8898, 20°	Brühl. Bei. 4, 778.
"	"	.89296, 15°	Perkin. J. P. C. (2), 31, 481.
"	"	.88125, 25°	
	"	.874, 10°	Linnemann.
	"	.8722, 14°	Linnemann. A. C. P. 161, 18.

Name.	Formula.	Sp. Gravity.	Auth
Isopropyl chloride	C_3H_7Cl	.8825, 0°	Zander. A
" "	"	.8826, 30°.5	181.
" "	"	.86884, 15°	Perkin. J
" "	"	.85750, 25°	31, 481.
Butyl chloride	C_4H_9Cl	.880	Gerhard.
" "	"	.9074, 0°	Lieben a
" "	"	.8874, 20°	A. C. P
" "	"	.8972, 14°	Linneman (4), 27,
" "	"	.8094, bp	Ramsay. 35, 463.
" "	"	.8794, 14°	De Heen.
Isobutyl chloride	"	.8953, 0°	
" "	"	.8651, 27°.8	Pierre an
" "	"	.8281, 59°	Ann. (4
" "	"	.8798, 15°	Linneman P. 162,
" "	"	.8626, 19°	Gladstone 249.
" "	"	.8078, 68°	Schiff. I
" "	"	.88356, 15°	Perkin.
" "	"	.87398, 25°	(2), 31,
Trimethylcarbyl chloride	"	.8658, 0°	Puchot. 28, 549.
" "	"	.84712, 15°	Perkin.
" "	"	.83683, 25°	(2), 31,
Normal pentyl chloride	$C_5H_{11}Cl$	.9013, 0°	
" " "	"	.8834, 20°	Lieben a
" " "	"	.8680, 40°	A. C. I
" " "	"	.8732, 20°	Lachowic 220, 19
Amyl chloride	"	.8859, 0°	Kopp. A
" "	"	.8625, 25°.1	307.
" "	"	.89584, 0°	Pierre. C.
" "	"	.8750 } 20°	Two p Schorl
" "	"	.8777 }	19, 52
" "	"	.7801, bp	Ramsay. 35, 463.
" "	"	.8716, 14°	De Heen.
" "	"	.8703, 20°	Lachowic 220, 19
" "	"	.7903, 99°.5	Schiff. B
" "	"	.88006, 15°	Perkin.
" "	"	.87164, 25°	(2), 31,
" " Active	"	.886	Le Bel. I 546.
" " Inactive	"	.8928, 0°	Balbiano. 1437.
Methylpropylcarbyl chloride	"	.912, 0°	Wagner
"	"	.891, 21°	cf. A 321.
Diethylcarbyl chloride	"	.915, 0°	
	"	.895, 21°	" "
Dimethylethylcarbyl chloride	"	.883, 0°	Wurtz
	"	.889, 0°	[illegible]
"	"	.870, 19°	

Name.	Formula.	Sp. Gravity.	Authority.
:thylcarbyl chlo-	$C_5H_{11}Cl$	.87086, 15°	Perkin. J. P. C. (2), 31, 481.
" "	"	.86219, 25°	
oride	$C_6H_{13}Cl$	.892, 16°	Pelouze and Cahours. J. 16, 525.
"	"	.892, 23°	Geibel and Buff. J. 21, 336.
"	"	.895, 13°	Cahours and Demarçay. C. R. 80, 1570.
hexyl chloride	"	.871, 24°	Domac. Ber. 14, 1712.
from tetrame-	"	.8943, 14°	Schorlemmer. J. 20, 567.
ane. "	"	.8874, 22°	
" "	"	.8759, 34°	
isopropylcarbyl	"	.8966, 0°	Pawlow. A. C. P. 196, 122.
l. "	"	.8784, 19°	
chloride	"	.8991, 0°	Friedel and Silva. J. C. S. (2), 11, 488.
loride	$C_7H_{15}Cl$	.9983, 15°	Petersen. J. 14, 618.
"	"	.890, 20°	Pelouze and Cahours. J. 15, 386.
"	"	.8737, 18°.5	Two preparations. Schorlemmer. A. C. P. 136, 257.
"	"	.8725, 20°	
"	"	.8965, 19°	
"	"	.891, 19°	Schorlemmer.
"	"	.881, 16°	Cross. J. C. S. 32, 123.
chloride	"	.8814, 16°.5	Schorlemmer. A. C. P. 136, 257.
"	"	.8780, 18°.5	
"	"	.8757, 22°	
ride	$C_8H_{17}Cl$	.892, 18°	Schorlemmer. J. 15, 386.
"	"	.895, 16°	Pelouze and Cahours. J. 16, 528.
"	"	.8802, 16°	Zincke. A. C. P. 152, 5.
"	"	.850	Cahours and Demarçay. C. R. 80, 1571.
"	"	.87857, 15°	Perkin. J. P. C. (2), 31, 481.
"	"	.87192, 25°	
hloride	"	.8834, 10°.5	Schorlemmer. J. 20, 567.
"	"	.8617, 36°	
tylcarbyl chlo-	"	.87075, 15°	Perkin. J. P. C. (2), 31, 481.
"	"	.86388, 25°	
oride. B. 196°	$C_9H_{19}Cl$	.899, 16°	Pelouze and Cahours. J. 16, 529.
"	"	.8962, 14°	Thorpe and Young. A. C. P. 165, 1.
" B. 182°	"	.911, 23°	Lemoine. B. S. C. 41, 161.
"	"	.908, 25°.8	
loride	$C_{10}H_{21}Cl$	.908, 19°	" "
chloride	$C_{12}H_{25}Cl$	.938, 22°	Pelouze and Cahours. J. 16, 530.
ide	$C_{16}H_{33}Cl$	.8412, 12°	Tüttscheff. J. 13, 406.

2d. Chlorides of the Series $C_n H_{2n} Cl_2$.

NAME.	FORMULA.	SP. GRAVITY.	AUTHO
Methylene chloride	$C H_2 Cl_2$	1.344, 18°	Regnault. 71, 378.
" "	"	1.360, 0°	Butlerow.
" "	"	1.377765, 0°	Thorpe.
" "	"	1.30098, 41°.6	37, 371
" "	"	1.33771, 15°	Perkin. J.
" "	"	1.32197, 25°	32, 522.
Ethylene chloride	$C_2 H_4 Cl_2$	1.256, 12°	Regnault. 58, 307.
" "	"	1.247, 18°	Liebig. A.
" "	"	1.28034, 0°	Pierre. C.
" "	"	1.2562, 20°	Haagen. 117.
" "	"	1.26, 14°	Maumené.
" "	"	1.272, 14°	Gladstone C. N. 29
" "	"	1.1356, 84°	Ramsay. J 463.
" "	"	1.28082, 0°	Thorpe.
" "	"	1.15635, 83°.5	371.
" "	"	1.2521, 20°	Brühl. 203, 1.
" "	"	1.1576, 83°.2	Schiff. Ber
" "	"	1.2656, 9°.8	Schiff. G
" "	"	1.1576, 83°.3	177.
" "	"	1.272, 14°	Gladstone. 249.
" "	"	1.25991, 15°	Perkin. J.
" "	"	1.24800, 25°	32, 523.
" "	"	1.25014, 20°	Weegman 2, 218.
Ethylidene chloride	"	1.174, 17°	Regnault. 71, 357.
" "	"	1.24074, 0°	Pierre. C.
" "	"	1.18[illegible], 4°.3	Geuther. J
" "	"	1.1[illegible], 6°.5	Darling. J
" "	"	1.201, 13°	Gladstone C. N. 29
" "	"	1.1743, 20°	Brühl. 203, 1.
" "	"	1.[illegible]070, 56°	Ramsay. J 463.
" "	"	1.2[illegible]24, 0°	Two s
" "	"	[illegible], 59°.9	Thor
" "	"	[illegible], 0°	37,18
" "	"	[illegible], 9°.8	
" "	"	[illegible]	Schiff. G
" "	"	[illegible], 5[illegible].5	177.
" "	"	[illegible], 15°	Perkin. J.
" "	"	[illegible], 25°	32, [illegible]
" "	"	[illegible], 20°	Weegman
Propylene chloride	$C_3 H_6 Cl_2$	[illegible]	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
ylene chloride	$C_3H_6Cl_2$	1.1656, 14°	Linnemann. A. C. P. 161, 18.
" "	"	1.184, 0°	Friedel and Silva. Z. C. 14, 489.
" "	"	1.155, 25°	
" "	"	1.182, 0°	
" "	"	1.153, 25°	
" "	"	1.0470, 97°.5	Schiff. Bei. 9, 559.
methylene chloride	"	1.201, 15°	Reboul. J. C. S. 36, 127.
" "	"	1.1896, 17°.6	Freund. Ber. 14, 2270.
imethylmethylene chloride. Methylchloracetol.	"	1.117, 0°	Friedel.
" "	"	1.06, 16°	Linnemann. A. C. P. 138, 125.
" "	"	1.0827, 16°	Linnemann. A. C. P. 161, 18.
" "	"	1.1058, 0°	Friedel and Silva. Z. C. 14, 489.
" "	"	1.0744, 25°	
" "	"	1.1125, 0°	
" "	"	1.0818, 25°	
" "	"	1.09620, 15°	Perkin. J. P. C. (2), 32, 523.
" "	"	1.09657, 15°	
" "	"	1.08430, 25°	
" "	"	1.08476, 25°	
Propylidene chloride	"	1.143, 10°	Reboul. C. R. 82, 378.
isobutylene chloride	$C_4H_8Cl_2$	1.112, 18°	Kolbe. J. 2, 338.
" "	"	1.0953, 0°	Kopp. A. C. P. 95, 307.
" "	"	1.0751, 20°.7	
isobutylidene chloride	"	1.0111, 12°	Oeconomides. Ber. 14, 1201.
Amylene chloride	$C_5H_{10}Cl_2$	1.058, 9°	Guthrie. J. 14, 665.
" "	"	1.2219, 0°	Bauer. J. 19, 531.
Isoamylidene chloride	"	1.05, 24°	Ebersbach. J. 11, 297.
Chloramyl chloride	"	1.194, 0°	Buff. J. 21, 333.
Hexylene chloride. B. 180°	$C_6H_{12}Cl_2$	1.087, 20°	Pelouze and Cahours. J. 16, 525.
" " B. 163°	"	1.0527, 11°	Henry. C. R. 97, 260.
Heptylene chloride	$C_7H_{14}Cl_2$	1.0295, 10°	Husemann. B. D. Z.

3d. Miscellaneous Non-Aromatic Chlorides.

NAME.	FORMULA.	SP. GRAVITY.	AU[THORITY]
Chloroform	$CHCl_3$	1.48, 18°	Liebig. 199.
"	"	1.491, 17°	Regnaul[t] 71, 38
"	"	1.493	Swan.
"	"	1.497	
"	"	1.418	Soube[iran and] Mialh[e]
"	"	1.496, 12°	
"	"	1.500, 15°.5	Gregory.
"	"	1.52523, 0°	Pierre. (
"	"	1.512, 12°	Schiff. [ ] 63.
"	"	1.49	Flückig[er]
"	"	1.472, 16°.5	Geuther.
"	"	1.507, 17°	Flückig[er] 5, 302.
"	"	1.502	Rump. (34.
"	"	1.500, 15°	Remys. 13, 43
"	"	1.3954, 63°	Ramsay. 463.
"	"	1.52657, 0°	Thorpe 371.
"	"	1.40877, 61°.2	
"	"	1.4018 } 63°	Schiff. 2763-
"	"	1.40814	
"	"	1.4081, 60°.6	Schiff. B
"	"	1.49089, 29°	Nasini. 135.
"	"	1.5039, 11°.8	Schiff. 177.
"	"	1.4081, 60°.9	
"	"	1.48978, 18°.58	With i[...] valu[e] P.A.
"	"	1.45695, 35°.86	
"	"	1.50027 } 15°	Perkin. (2), 8
"	"	1.50085	
"	"	1.48432 } 25°	
"	"	1.48492	
Trichlorethane	[illegible]	[illegible], 16°	Regnault 71, 364
"	"	[illegible], 0°	Pierre. C
"	"	[illegible], 15°	Perkin. 32, 523
"	"	[illegible]44, 25°	
[illegible]	[illegible]	[illegible], 17°	Regnault 69, 153
	"	[illegible], 0°	Pierre. C
	"	[illegible]	
	"	[illegible]	Schiff. 177.
	"	[illegible] 113°.5	
	"	[illegible]	
	"	[illegible]	Delacre. Belg.
	"	[illegible], 15°	Perkin.
	"	[illegible], 25°	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
achlorethane. B. 102°	$C H_2 Cl. C Cl_3$	1.530, 17°	Regnault. Ann. (2), 71, 366.
" B. 135°	"	1.576, 19°	Regnault. Ann. (2), 68, 162.
"	"	1.61158, 0°	Pierre. C. R. 27, 213.
ylene tetrachloride	$C H Cl_2. C H Cl_2$	1.614, 0°	Paterno and Pisati. Z. C. 14, 385.
" "	"	1.578, 24°.3	
" "	"	1.522, 100°.1	
achlorethane	$C H Cl_2. C Cl_3$	1.644	Regnault. Ann. (2), 71, 368.
"	"	1.66237, 0°	Pierre. C. R. 27, 213.
"	"	1.71, 0°	Paterno. Z. C. 12, 245.
"	"	1.69, 13°	
"	"	1.70893, 0°	Thorpe. J. C. S. 37, 371.
"	"	1.46052, 159°.1	
lorethylene	$C_2 H_2 Cl_2$	1.250, 15°	Regnault. Ann (2), 69, 155.
hlorpropane	$C_3 H_5 Cl_3$	1.347	Cahours. J. 3, 496.
hlorhydrin	$CH_2Cl. CHCl. CH_2Cl$	1.41, 0°	Three separate products. Linnemann. A. C. P. 136, 51.
"	"	1.40, 8°	
"	"	1.417, 15°	
"	"	1.41, 0°	Oppenheim. J. 19, 521.
"	"	1.39805 } 15°	Perkin. J. P. C. (2), 32, 523.
"	"	1.39836 } 15°	
"	"	1.38758 } 25°	
"	"	1.38788 } 25°	
trichlorhydrin	$CH_2Cl. CH_2. CHCl_2$	1.362, 15°	Romburgh. Ber. 14, 1400.
ylene tetrachloride	$C_3 H_4 Cl_4$	1.47, 13°	Borsche and Fittig. J. 18, 313.
" "	"	1.482	Gunswindt. Jena Inaug. Diss. 1873.
" "	"	1.485	
achlorglycide	"	1.496, 17°	Pfeffer and Fittig. J. 18, 504.
ylidene tetrachloride	"	1.503, 17°.5	Hartenstein. J. P. C. (2), 7, 295.
" "	"	1.522, 15°	Romburgh. Ber. 14, 1400.
achlorpropane	"	1.548	Cahours. J. 3, 496.
"	"	1.55, s.	Berthelot.
achlorpropane	$C_3 H_2 Cl_6$	1.626	Cahours. J. 3, 496.
tachlorpropane	$C_3 H Cl_7$	1.731	" "
oropropylene	$C_3 H_5 Cl$	.918, 9°	Linnemann. J. 19, 308.
"	"	.9307, 0°	Oppenheim. J. 19, 521.
"	"	.931, 0°	Oppenheim. J. 21, 339.
l chloride	"	.934, 0°	Oppenheim. J. 19, 521.
"	"	.9547, 0°	Tollens. A. C. P. 156, 155.
	"	.9610, 0°	Zander. A. C. P. 214, 181.
	"	.9002, 46°	

NAME.	FORMULA.	SP. GRAVITY.	AUTHO[RITY]
Allyl chloride	C_3H_5Cl	.9055 } 44°.8	Schiff. G 177.
" "	"	.9058 } 44°.8	
" "	"	.9379, 20°	Brühl. Be
" "	"	.94366, 15°	Perkin. J (2), 32, 5
" "	"	.93228, 25°	
Allylidene dichloride	$C_3H_4Cl_2$	1.170, 24°.5	Hübner an ther. J.
α Dichlorpropylene. Epidichlorhydrin.	"	1.21	Claus. A. C 125.
" "	"	1.22, 8°	Henry. Ber
β Dichlorpropylene. Epidichlorhydrin.	"	1.21, 20°	Reboul. J.
" "	"	1.233, 17°.5	Hartenstein. C. (2), 7,
" "	"	1.226, 15°	Romburgh. 245.
" "	"	1.25, 15°	Friedel an Quoted b burgh.
" "	"	1.218, 25°	
α Trichlorpropylene	$C_3H_3Cl_3$	1.387, 14°	Borsche and J. 18, 313
β Trichlorpropylene	"	1.414, 20°	Pfeffer and J. 18, 504
Propargyl chloride	C_3H_3Cl	1.0454, 5°	Henry. Ber
Crotonylene dichloride	$C_4H_6Cl_2$	1.131	Kekulé. J.
Chlorisobutylene	C_4H_7Cl	.9785, 12°	Oeconomide 14, 1201.
Trichlorpentane	$C_5H_9Cl_3$	1.33, 13°	Buff. J. 21
Tetrachlorpentane	$C_5H_8Cl_4$	2.4292	Bauer. J. 1
Chloramylene	C_5H_9Cl	.9992, 0°	"
"	"	.872, 5°.1	Bruylants. 411.
Isoprene hydrochlorate	"	.868, 16°	Bouchardat. 38, 323.
Isoprene dichloride	$C_5H_8Cl_2$	1.065, 16°	"
Trichlorhexane	$C_6H_{11}Cl_3$	1.193, 21°	Pelouze an hours. J.
Hexachlorhexane	$C_6H_8Cl_6$	1.598, 20°	"
Chlorhexylene	$C_6H_{11}Cl$	.9636, 11°	Henry. C.R.
Chlordiallyl	C_6H_9Cl	.9197, 18°.2	Henry. J.C.S
Chlordiamylene chloride	$C_{10}H_{19}Cl_3$	1.1638, 0°	Bauer. J. 2
Eikosylene chloride	$C_{20}H_{38}Cl_2$	1.013, 24°	Lippman Hawliczek 12, 73.
Isovinyl chloride	$(C_2H_3Cl)_n$	1.406	Baumann. 163, 308.
Chloronicene	C_5H_3Cl	1.141, 10°	St. Evre. J.

4th. Aromatic Compounds.

Name.	Formula.	Sp. Gravity.	Authority.
chlorbenzene	C_6H_5Cl	1.1499, 0°	From benzene. Sokoloff. J. 18, 517.
"	"	1.1347, 10°	
"	"	1.1258, 20°	
"	"	1.1188, 30°	
"	"	1.1199, 0°	From phenol. Sokoloff. J. 18, 517.
"	"	1.1085, 10°	
"	"	1.099, 20°	
"	"	1.092, 30°	
"	"	1.118	Jungfleisch. J. 19, 551.
"	"	1.77, —40°	Jungfleisch. J. 20, 36.
"	"	.980. 133°	
"	"	1.1293, 0°	Jungfleisch. J. 21, 343.
"	"	1.12855, 0°	From benzene. Adrieenz. Ber. 6, 443.
"	"	1.11807, 9°.79	
"	"	1.10467, 22°.43	
"	"	1.04428, 77°.27	
"	"	1.12818, 0°	From phenol. Adrieenz. Ber. 6, 443.
"	"	1.11421, 9°.79	
"	"	1.10577, 22°.43	
"	"	1.04299, 77°.27	
"	"	.9817 } 132°	Schiff. G. C. I. 13, 177.
"	"	.9818 }	
"	"	1.1066, 20°	Brühl. Bei. 4, 780.
"	"	1.1046, 25°.2	Schall. Ber. 17, 2564.
"	"	1.0708, 52°.3	
"	"	1.106, 15°	Wallach and Heusler. A. C. P. 243, 226.
dichlorbenzene	$C_6H_4Cl_2$	1.3278, 0°	Beilstein and Kurbatow. A. C. P. 176, 41.
"	"	1.3254, 0°	Friedel and Crafts. Ann. (6), 10, 416.
lichlorbenzene	"	1.3148	Beilstein and Kurbatow. B. S. C. 23, 179.
"	"	1.307, 0°	Beilstein and Kurbatow. J. C. S. (2), 13, 450.
lichlorbenzene	"	1.459, s.	Jungfleisch. J. 19, 551.
"	"	1.250, 53°	Jungfleisch. J. 20, 36.
"	"	1.123, 171°	
"	"	1.4581, 20°.5	Jungfleisch. J. 21, 347.
"	"	1.241, 63°	
"	"	1.2062, 93°	
"	"	1.1366, 166°	
"	"	1.467, 4°	Schröder. Ber. 12, 561.
"	"	1.2499, 55°.1	Schiff. A. C. P. 223, 247.

NAME.	FORMULA.	SP. GRAVITY.	AUTH
Trichlorbenzene	$C_6 H_3 Cl_3$	1.457, 7°	Mitscherl 35, 372.
" 1.3.4	"	1.575	Jungfleisc 551.
" "	"	1.457, 17°, s.	Jungfleisc 36.
" "	"	1.227, 206°	
" "	"	1.574, 10°, s.	Jungfleisc 350.
" "	"	1.4658, 10°, l.	
" "	"	1.4460, 26°	
" "	"	1.4111, 56°	
" "	"	1.2427, 196°	
" "	"	1.4354, 12°, l.	Beilstein batow. 192, 230
Tetrachlorbenzene. 1.2.4.5	$C_6 H_2 Cl_4$	1.748	Jungfleisc 551.
" "	"	1.448, 139°	Jungfleisc 36.
" "	"	1.315, 240°	
" "	"	1.7344, 10°, s.	Jungfleis 352.
" "	"	1.4839, 149°	
" "	"	1.3958, 179°	
" "	"	1.3281, 230°	
Pentachlorbenzene	$C_6 H Cl_5$	1.625, 74°	Jungfleisc 36.
"	"	1.870, 270°	
"	"	1.8422, 10°	Jungfleisc 358.
"	"	1.8842, 16°.5	
"	"	1.6091, 84°	
"	"	1.5732, 114°	
"	"	1.3824, 261°	
Monochlortoluene	$C_6 H_4 . C H_3 . Cl$	1.080, 14°	Limpricht 591.
" 1.4	"	1.0735, 27°.2	Aronheim rich. B
" "	"	.9351, 159°.8	Schiff. G 177.
"	"	1.072, 24°.44	Cattaneo.
"	"	1.061, 35°.48	
"	"	1.049, 48°.71	
"	"	1.029, 67°.80	
"	"	1.013, 83°.86	
"	"	[illegible].81	
"	"	[illegible], 19°	Gladstone. 249.
[illegible]	C, H, C H, C[illegible]	[illegible]	Cannizzar 621.
		[illegible]	
		[illegible], 14°	Limpricht 592.
		[illegible]	Schiff. G 177.
		[illegible]	
		[illegible]	
		[illegible]	Cattaneo 584.
		[illegible]	
		[illegible]	
		[illegible]	Gladstone 249.
		[illegible]	Schiff. G 177.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Dichlortoluene. 1.2.4	$C_6H_3.CH_3.Cl_2$	1.24597, 20°	Lellmann and Klotz. A. C. P. 231, 308.
" 1.2.5	"	1.2535, 20°	" "
" 1.3.4	"	1.2518, 16°	Aronheim and Dietrich. Ber. 8, 1403.
" "	"	1.2596, 18°.4	
" "	"	1.2512, 20°	Lellmann and Klotz. A. C. P. 231, 308.
" B. 202°	"	1.256, 13°	Beilstein. J. 13, 412.
" B. 207°	"	1.2557, 14°	Limpricht. J. 19, 593.
Benzylidene dichloride	$C_6H_5.CHCl_2$	1.245, 16°	Cahours. J. 1, 711.
" "	"	1.295, 16°	Hübner and Bente. Ber. 6, 804.
" "	"	1.2699, 0°	Schiff. Ber. 19, 563.
" "	"	1.2122, 56°.8	
" "	"	1.1877, 79°.2	
" "	"	1.1257, 135°.5	
" "	"	1.0407, 203°.5	
Trichlortoluene	$C_6H_2.CH_3.Cl_3$	1.413, 9°	Henry. J. 22, 508.
"	"	1.4093, 19°.5	Aronheim and Dietrich. Ber. 8, 1405.
Dichlorbenzyl chloride	$C_6H_3Cl_2.CH_2Cl$	1.44, 0°	Naquet. J. 15, 419.
Benzyl trichloride	$C_6H_5.CCl_3$	1.61, 13°	Limpricht. J. 18, 538.
" "	"	1.380, 14°	Limpricht. J. 19, 594.
Tetrachlortoluene	$C_6HCl_4.CH_3$	1.495, 14°	Limpricht. J. 19, 595.
Trichlorbenzyl chloride	$C_6H_2Cl_3.CH_2Cl$	1.547, 23°	Beilstein and Kuhlberg. J. 21, 361.
Orthodichlorbenzylene dichloride.	$C_6H_3Cl_2.CHCl_2$	1.518, 22°	" "
Chlorbenzo-trichloride. 1.3	$C_6H_4Cl.CCl_3$	1.74 } 13°	Limpricht. A. C. P. 134, 58.
" "	"	1.76 } 13°	
" " 1.2	"	1.51	Kolbe and Lautemann. A. C. P. 115, 196.
Dichlorbenzo-trichloride	$C_6H_3Cl_2.CCl_3$	1.587, 21°	Beilstein and Kuhlberg. Z. C. 21, 363.
" "	"	1.5829, 16°	Aronheim and Dietrich. Ber. 8, 1403.
Trichlorbenzylene dichloride.	$C_6H_2Cl_3.CHCl_2$	1.607, 22°	Beilstein and Kuhlberg. Z. C. 21, 362.
Tetrachlorbenzyl chloride	$C_6HCl_4.CH_2Cl$	1.634, 25°	" "
Tetrachlorbenzylene dichloride.	$C_6HCl_4.CHCl_2$	1.704, 25°	Beilstein and Kuhlberg. Z. C. 21, 364.
Chlororthoxylene	$C_6H_3.CH_3.CH_3.Cl$	1.0863, 19°	Claus and Kautz. Ber. 18, 1367.
" 1.2.4	"	1.0692, 15°	Krüger. Ber. 18, 1757.
Chlormetaxylene. 1.3.4	"	1.0598, 20°	Jacobsen. Ber. 18, 1761.
Isotolyl chloride	$C_6H_4.CH_3.CH_2Cl$	1.079, 0°	Gundelach. B. S. C. 25, 385.
" "	"	1.064, 20°	
Chlorethylbenzene	$C_6H_4.C_2H_5.Cl$	1.075, 0°	Istrati. B. S. C. 42, 115.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORI[TY]
Chlorethylbenzene	$C_6H_4.C_2H_5.Cl$	1.068	Istrati. Ber. 704.
Dichlororthoxylene	$C_6H_4.CH_2.CH_2.Cl_2$	1.333, s.	Colson. Ann 86.
"	"	1.150, 70°, l.	
"	"	1.250, 20°, l.	
"	"	1.0980	Kautz. Frei Diss. 1886.
Dichlormetaxylene	"	1.302, 20°, s.	Colson. Ann 86.
"	"	1.202, 40°, l.	
Dichlorparaxylene	"	1.343, s.	"
Orthoxylene dichloride	$C_6H_4(CH_2Cl)_2$	1.393	Colson. C. 429.
Metaxylene dichloride	"	1.370	"
Paraxylene dichloride	"	1.417	"
Orthoxylene tetrachloride	$C_6H_4(CHCl_2)_2$	1.601	"
Metaxylene tetrachloride	"	1.536	Colson and C. R. 102,
Paraxylene tetrachloride	"	1.606	"
Chlorcymene. 1.4.6	$C_6H_3.CH_3.C_3H_7.Cl$	1.014, 14°	Gerichten. 1249.
Diethylmonochlorbenzene	$C_6H_3.Cl.(C_2H_5)_2$	1.036	Istrati. Ber. 704.
Triethylmonochlorbenzene.	$C_6H_2.Cl.(C_2H_5)_3$	1.028	"
Tetrethylmonochlorbenzene.	$C_6H.Cl.(C_2H_5)_4$	1.022	"
Pentethylmonochlorbenzene.	$C_6Cl(C_2H_5)_5$	1.065	"
β Chlorstyrolene	C_8H_7Cl	2.112, 22°.3	Glaser. A.C 166.
β Benzene hexchloride	$C_6H_6Cl_6$	1.89, 19°	Meunier. A 10, 223.
By action of ethylene on monochlorbenzene.	C_9H_9Cl	1.179	Istrati. Ber. 704.
α Chlornaphthalene	$C_{10}H_7Cl$	1.2052, 6°.2	Laurent. Qu Carius.
"	"	1.2028, 6°.4	Carius. A.C 146.
"	"	1.2025, 15°	Koninck an quart. C.R
β Chlornaphthalene	"	1.[illegible], 16°	Rimarenko. 664.
Naphthalene dichloride	$C_{10}H_8Cl_2$	1.287, 12°.5	Gladstone. 249.
" "	"	1.2848, 18°	
Trichloracenaphtene	$C_{12}H_7Cl_3$	1.43, 17°	Kebler and A. C. J.
Camphyl chloride	$C_9H_{13}Cl$	1.0[illegible], 14°	Schwanert. 465.
Geraniol hydrochlorate	$C_{10}H_{17}Cl$	[illegible], 20°	Jacobsen. 157, 23[illegible]
[illegible] hydrochlorate	"	1.43[illegible]	Watts' Di[ct.]
[illegible]	"	[illegible] 17°	Buchner.
[illegible]	"	[illegible], 0°	Two [illegible]
[illegible]	"	[illegible]	

AME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
iene hydro-	$C_{10} H_{17} Cl$	.9927, 0°	Riban. C. R. 79, 225.
ne of Muscat	"	.9827, 15°	Cloëz. J. 17, 536.

I. COMPOUNDS CONTAINING C, H, O, AND CL.

AME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
yl alcohol	$C_2 H_4 Cl_2 O$	1.145, 15°	Delacre. Bull. Acad. Belg. (3), 13, 248.
yl alcohol	$C_2 H_3 Cl_3 O$	1.55, 23°.8	Garzarolli-Thurnlackh. Ber. 14, 2826.
yl alcohol	$C_6 H_{12} Cl_2 O$	1.4, 12°	Destrem. Ann. (5), 27, 50.
hyl oxide	$C_2 H_4 Cl_2 O$	1.315, 20°	Regnault. Ann. (2), 71, 398.
nethyl oxide	$C_2 H_2 Cl_4 O$	1.606, 20°	Regnault. Ann. (2), 71, 401.
nethylethyl ox-	$C_3 H_4 Cl_4 O$	1.84, 0°	Magnanini. G. C. I. 16, 330.
oxide	$C_4 H_9 Cl O$	1.0572, 0°	Henry. C. R. 100, 1007.
l oxide	$C_4 H_8 Cl_2 O$	1.174, 23°	Lieben. J. 12, 446.
thyl oxide	$C_4 H_6 Cl_4 O$	1.5008	Malaguti. Ann. (2), 70, 341.
"	"	1.4379, 0°	Paterno and Pisati. Ber. 5, 1054.
"	"	1.4182, 15°.2	Paterno and Pisati. Ber. 5, 1054.
"	"	1.3055, 99°.9	Paterno and Pisati. Ber. 5, 1054.
"	"	1.4211, 15°	Roscoe and Schorlemmer's Treatise.
ethyl oxide	$C_4 H_5 Cl_5 O$	1.645	Jacobsen. Z. C. 14, 444.
"	"	1.577, 8°	Henry. Ber. 7, 763.
acid	$C_2 H_3 Cl O_2$	1.366, 73°	R. Hofmann. J. 10, 348.
ic acid	$C_2 H_2 Cl_2 O_2$	1.5216, 15°	Maumené. J. 17, 315.
tic acid	$C_2 H Cl_3 O_2$	1.617, 46°	Dumas. A. C. P. 32, 109.
onic acid	$C_3 H_5 Cl O_2$	1.28, 0°	Clermont. Z. C. 14, 349.
ic acid	$C_4 H_7 Cl O_2$	1.072, 0°	Balbiano. Ber. 10, 1749.
" γ	"	1.2498, 10°	Henry. C. R. 101, 1158.
" ?	"	1.065, 15°	Haubst. J. C. S. (2), 1, 693.
[illegible]	"	1.062, 0°	Balbiano. Ber. 11, 1693.
	$C_? H_8 Cl O_2$	1.236, 15°	Röse. Ber. 13, 2417.

NAME.	FORMULA.	SP. GRAVITY.	AUTH
Ethyl chlorocarbonate	$C_3 H_5 Cl O_2$	1.133, 15°	Dumas. 54, 230
Propyl chlorocarbonate	$C_4 H_7 Cl O_2$	1.094, 15°	Röse. B
Isopropyl chlorocarbonate	"	1.144, 4°	Spica. J 1028.
Isobutyl chlorocarbonate	$C_5 H_9 Cl O_2$	1.053, 15°	Röse. B
Isoamyl chlorocarbonate	$C_6 H_{11} Cl O_2$	1.032, 15°	"
Dichlorethyl formate	$C_3 H_4 Cl_2 O_2$	1.261, 16°	Malaguti 70, 370
Pentachloramyl formate	$C_6 H_7 Cl_5 O_2$	1.52	Springer. 298.
Methyl monochloracetate	$C_3 H_5 Cl O_2$	1.22, 15°	Henry. 448.
" "	"	1.2352, 19°.2	Henry. 250.
Methyl dichloracetate	$C_3 H_4 Cl_2 O_2$	1.3808, 19°.2	" .
Dichlormethyl acetate	"	1.25	Malaguti 70, 381
Methyl trichloracetate	$C_3 H_3 Cl_3 O_2$	1.4969, 14° }	Bauer. A
" "	"	1.4902, 20°.2 }	163.
" "	"	1.4892, 19°.2	Henry. 250.
Ethyl monochloracetate	$C_4 H_7 Cl O_2$	1.1585, 20°	Brühl. 203, 1.
" "	"	.9925, 144°.5	Schiff. 177.
" "	"	1.1722, 8°	Henry. 1280.
Ethyl dichloracetate	$C_4 H_6 Cl_2 O_2$	1.301, 12°	Malagut 70, 36
" "	"	1.29	Forscher ther.
" "	"	1.2821, 20°	Brühl. 203, 1.
" "	"	1.0918 } 157°.7	{ Schiff.
" "	"	1.0915 }	{ 177.
Dichlorethyl acetate	"	1.3217, 10°.6	Henry. 1308.
" "	"	1.104, 15°	Delacre. Belg. (
Ethyl trichloracetate	$C_4 H_5 Cl_3 O_2$	1.3826, 20°	Brühl. 203, 1.
" "	"	1.1650 } 167°.1	{ Schiff.
" "	"	1.1651 }	{ 177.
Monochlorethyl dichloracetate.	"	1.200, 15°	Delacre. 183.
Dichlorethyl monochloracetate.	"	1.216, 15°	"
Trichlorethyl acetate	"	1.367	Léblanc. 10, 2[illegible]
" "	"	1.35, 20°	Malaguti 16, 62
" "	"	1.3907, 23°.3	Garzaroli- lackh. [illegible]
" "	"	1.187, 15°	Delacre[illegible]

ɪAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
ethyl acetate	$C_4 H_4 Cl_4 O_2$	1.485, 25°	Léblanc. Ann. (3), 10, 212.
ethyl trichlor-	"	1.251, 15°	Delacre. Ber. 21, ref. 183.
yl dichlorace-	"	1.25, 15°	" "
hyl monochlor-	"	1.25	" "
hyl dichlorace-	$C_4 H_3 Cl_5 O_2$	1.267	" "
thyl acetate	$C_4 H_2 Cl_6 O_2$	1.698, 28°.5	Léblanc. Ann. (3), 10, 215.
rethyl acetate	$C_4 H Cl_7 O_2$	1.692, 24°.5	Léblanc. Ann. (3), 10, 208.
nochloracetate	$C_5 H_9 Cl O_2$	1.1096, 8°	Henry. C. R. 100, 114.
nochloracetate	$C_6 H_{11} Cl O_2$	1.013, 0°	Gehring. C. R. 102, 1400.
"	"	1.081, 15°	
ıtyl acetate	$C_6 H_9 Cl_3 O_2$	1.3440, 8°.5	Garzarolli-Thurnlackh. Ber. 15, 2619.
nochloracetate	$C_7 H_{13} Cl O_2$	1.063, 0°	Hougounenq. B. S. C. 45, 328.
chlorpropionate	$C_4 H_7 Cl O_2$	1.075, 4°	Kahlbaum. Ber. 12, 344.
loropropionate	$C_5 H_9 Cl O_2$	1.0869, 20°	Brühl. A. C. P. 203, 1.
loropropionate	"	1.1160, 8°	Henry. C. R. 100, 114.
lorpropionate	$C_5 H_8 Cl_2 O_2$	1.2461, 20°	Brühl. A. C. P. 203, 1.
"	"	1.2493, 0°	Klimenko. Z. C. 13, 654.
yl propionate	"	1.282, 8°	Henry. C. R. 100, 114.
lorbutyrate	$C_5 H_9 Cl O_2$	1.1894, 10°	Henry. C. R. 101, 1158.
β dichlorbuty-	$C_5 H_8 Cl_2 O_2$	1.2809, 0°	Zeisel. Ber. 19, ref. 749.
" "	"	1.2614, 18°.8	
" "	"	1.2355, 41°.1	
orbutyrate	$C_6 H_{11} Cl O_2$	1.0517, 20°	Brühl. A. C. P. 203, 1.
"	"	1.1221, 10°	Henry. C. R. 101, 1158.
"	"	1.063, 17°.5	Markownikoff. A. C. P. 153, 243.
chlorpropylcarate.	$C_7 H_{11} Cl_3 O_2$	1.3048, 11°.5	Garzarolli-Thurnlackh. A. C. P. 223, 149.
nthic ether	$C_9 H_{17} Cl O_2$. ?	1.2912, 16°.5	Malaguti. Ann. (2), 70, 368.
of chlorinated formate.	$C_4 H_5 Cl_3 O_4$	1.4786, 14°	Guthzeit. Quoted by Hentschel.
"	"	1.4741, 27°	Hentschel. J. P. C. (2), 36, 99.
"	$C_8 H_9 Cl_7 O_8$	1.5191	" "
inated	$C_6 H_{11} Cl O$	.9482, 0°	Lieben and Bauer. J. 15, 494.

NAME.	FORMULA.	SP. GRAVITY.	AUTHO
Derivative of chlorinated ether.	$C_6 H_{13} Cl O$	.9735, 0°	Lieben an J. 15, 3
Chloracetic anhydride	$C_4 H_5 Cl O_3$	1.201, 21°	Anthoine. Ch. (5),
Trichloracetic anhydride	$C_4 H_3 Cl_3 O_3$	1.530, 20°	"
Tetrachloracetic anhydride.	$C_4 H_2 Cl_4 O_3$	1.574, 24°	"
Acetyl chloride	$C_2 H_3 O. Cl$	1.125, 11°	Gerhardt.
" "	"	1.1305, 0° }	Kopp. A. 307.
" "	"	1.1072, 16° }	
" "	"	1.13773, 0° }	Thorpe. 37, 371.
" "	"	1.05698, 50°.73 }	
" "	"	1.1051, 20°	Brühl. A 203, 1.
Chloracetyl chloride	$C_2 H_2 Cl O. Cl$	1.495, 0°	Wurtz. J
Propionyl chloride	$C_3 H_5 O. Cl$	1.0646, 20°	Brühl. A 203, 1.
α Chloropropionyl chloride	$C_3 H_4 Cl O. Cl$	1.2394, 7°.5	Henry. C 114.
β Chloropropionyl chloride	"	1.3307, 13°	"
Butyryl chloride	$C_4 H_7 O. Cl$	1.0277, 20°	Brühl. A 203, 1.
Isobutyryl chloride	"	1.0174, 20°	"
Chlorobutyryl chloride	$C_4 H_6 Cl O. Cl$	1.257, 17°	Markowni C. P. 15
" "	"	1.2679, 10°	Henry. C 1158.
Valeryl chloride	$C_5 H_9 O. Cl$	1.005, 6°	Béchamp.
" "	"	.9887, 20°	Brühl. A 203, 1.
Chloracetone	$C_3 H_5 Cl O$	1.19	Linneman
"	"	1.14, 14°	Riche. J.
"	"	1.162, 16°	Linneman 312.
"	"	1.18, 16°	Linneman 308.
"	"	1.17	Henry. B 219.
"	"	1.158, 13°	Cloëz. A 145.
Dichloracetone	$C_3 H_4 Cl_2 O$	1.331	Kane.
"	"	1.236, 21°	Fittig. J.
"	"	1.236, 0°	Theegarten 4, 580.
"	"	1.234, 15°	Cloëz. A 145.
Tetrachloracetone	$C_3 H_2 Cl_4 O$	1.482, 17°	"
Pentachloracetone	$C_3 H Cl_5 O$	1.6 }	Städeler.
"	"	1.7 }	
"	"	1.627, 8° }	Two i Cloëz. 39, 638
"	"	1.526, 14° }	
Chloraldehyde	$C_2 H_3 Cl O$	1.33	Riche. J.
Paradichloraldehyde	$(C_2 H_2 Cl_2 O)_x$	1.69, s.	Jacobsen.
Chloral	$C_2 H Cl_3 O$	1.502, 18°	Liebig. A 195.
"	"	[illegible]	[illegible]
"	"	[illegible]	

[N]AME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
	$C_2 H Cl_3 O$	1.5448, 0°	Thorpe. J. C. S. 37, 371.
	"	1.3821, 97°.2	
	"	1.5121, 20°	Brühl. A. C. P. 203, 1.
	"	1.54179 } 4°	Passavant. C. N. 42, 288.
	"	1.54170 } 4°	
	"	1.3692, 97°.73	
	"	1.5292, 9°	Perkin. J. C. S. 51, 808.
	"	1.5197, 15°	
	"	1.5060, 25°	
alide	$(C_2 H Cl_3 O)_n$	1.5765, 14°	Clöez. J. 12, 434.
rdrate	$C_2 H_3 Cl_3 O_2$	1.901	Rüdorff. Ber. 12, 252.
"	"	1.818, 4°, pulv.	Schröder. Ber. 12, 561.
"	"	1.848, 4°, cryst.	
"	"	1.6415, 49°.9	Perkin. J. C. S. 51, 808.
"	"	1.6274, 58°.4	
"	"	1.6136, 66°.9	
"	"	1.5704 } 66°, l.	Jungfleisch, Lebaigne, and Roucher. J. Ph. C. (4), 11, 208.
"	"	1.5719 } 66°, l.	
"	"	1.5771 } 66°, l.	
hylate	$C_4 H_7 Cl_3 O_2$	1.143, 40°, l.	Martins and Mendelssohn-Bartholdy. Z. C. 13, 650.
"	"	1.3286 } 66°, l.	Jungfleisch, Lebaigne, and Roucher. J. Ph. C. (4), 11, 208.
"	"	1.3439 } 66°, l.	
nylate	$C_7 H_{11} Cl_3 O_2$	1.234, 25°	Martins and Mendelssohn-Bartholdy. Z. C. 13, 650.
yl chloral	$C_4 H_4 Cl_4 O_2$	1.4761, 17°	Meyer and Dulk. A. C. P. 171, 65.
hloral hydrate	$C_6 H_7 Cl_3 O_4$	1.422, 11°	" "
oral ethylate	$C_6 H_9 Cl_3 O_3$	1.327, 11°	" "
e of chloral	$C_6 H_6 Cl_8 O_2$	1.73, 17°	Henry. Ber. 7, 764.
" "	$C_7 H_{10} Cl_4 O_3$	1.42, 11°	" "
oral	$C_4 H_5 Cl_3 O$	1.3956, 20°	Brühl. A. C. P. 203, 1.
"	"	1.4111, 7°	Gladstone. Bei. 9, 249.
loral hydrate	$C_4 H_7 Cl_3 O_2$	1.693 } 4°	Schröder. Ber. 12, 561.
" "	"	1.695 } 4°	
re of chloralide	$C_5 H Cl_7 O_3$	1.7426, 20°	Anschutz and Haslam. A. C. P. 239, 300.
leral	$C_5 H_9 Cl O$	1.108, 14°	A. Schröder. Z. C. 14, 510.
e of valeral	$C_{10} H_{10} Cl_4 O$	1.272, 14°	" "
"	$C_{10} H_{12} Cl_6 O$	1.397, 14°	" "
ylmethyloxide	$C_3 H_4 Cl_2 O$	1.2934, 0°	Denaro. G. C. I. 14, 117.
" "	"	1.1574, 100°	
[illegible] ethyl ox-	$C_4 H_7 Cl O$	1.0361, 19°	Godefroy. C. R. 102, 869.
	[illegible] $H_4 Cl_2 O$	1.3725, 0°	Paterno and Pisati. J. C. S. (2), 11, 158.
		1.2354, 99°.9	

Name.	Formula.	Sp. Gravity.	Author
Trichlorvinyl ethyl oxide	$C_4 H_5 Cl_3 O$	1.3322, 19°	Godefroy. (869.
Methylene aceto-chloride	$C_3 H_5 Cl O_2$	1.1958, 14°.2	Henry. B. 448.
Ethylene aceto-chloride	$C_4 H_7 Cl O_2$	1.1783, 0°	Simpson. J
" "	"	1.114, 15°	Franchimo S. 44, 45
Ethylene butyro-chloride	$C_6 H_{11} Cl O_2$	1.0854, 0°	Simpson. J
Ethylidene oxychloride	$C_4 H_8 Cl_2 O$	1.1376, 12°	Lieben. J.
" "	"	1.136, 14°.5	Laatsch. 218, 13.
Ethylidene aceto-chloride	$C_4 H_7 Cl O_2$	1.114, 15°	Rübencam P. 225, 2
Ethylidene propio-chloride.	$C_5 H_9 Cl O_2$	1.071, 15°	"
Ethylidene butyro-chloride.	$C_6 H_{11} Cl O_2$	1.038, 15°	"
Ethylidene valero-chloride	$C_7 H_{13} Cl O_2$	.997, 15°	"
Aldehydemethyl chloride	$C_3 H_7 Cl O$	.996, 17°	"
Trichlordimethyl acetal	$C_4 H_7 Cl_3 O_2$	1.28	Magnanini. 16, 330.
Trichlormethylethyl acetal.	$C_5 H_9 Cl_3 O_2$	1.32	"
Chloracetal	$C_6 H_{13} Cl O_2$	1.0195	Lieben. J.
"	"	1.0418, 0°	Paterno and ra. J.C.S 1217.
"	"	1.0416, 26°.3	
"	"	.9315, 99°.9	
"	"	1.026, 15°	Klien. J. (291.
Dichloracetal	$C_6 H_{12} Cl_2 O_2$	1.1383, 14°	Lieben. J.
Trichloracetal	$C_6 H_{11} Cl_3 O_2$	1.2813, 0°	Paterno a J. C. S. 258.
"	"	1.2655, 22°.2	
"	"	1.1617, 99°.96	
"	"	1.288	Byasson. (46.
Trimethylene chlorhydrin	$C_3 H_7 Cl O$	1.132, 17°	Reboul. C 169.
Propylene chlorhydrin	"	1.1302, 0°	Oeser. J. 1
" "	"	1.247	Oppenheim. 340.
Chlorbutylene chlorhydrin	$C_4 H_8 Cl_2 O$	1.0335, 0°	Oeconomid 14, 1568.
Hexylene chlorhydrin	$C_6 H_{13} Cl O$	1.0143, 11°	Henry. C.I
" "	"	1.018, 11°	
Hexylene aceto-chloride	$C_8 H_{15} Cl O_2$	1.04, 6°	"
Heptylene chlorhydrin	$C_7 H_{15} Cl O$	1.014, 0°	Clermont. 411.
" "	"	1.001, 14°	
Octylene chlorhydrin	$C_8 H_{17} Cl O$	1.003, 0°	"
" "	"	.987, 31°	
Octylene aceto-chloride	$C_{10} H_{19} Cl O_2$	1.026, 0°	"
" "	"	1.011, 18°	
Dichlorethoxyethylene	$C_4 H_6 Cl_2 O$	1.08, 10°	Geuther a hoff. J. 7, 114.
Pentachlorpropylene oxide.	$C_3 H Cl_5 O$	a1.5	Cloëz. A 145.
Ethyl-glycollic chloride	$C_4 H_7 Cl O_2$	1.145, 1°	Henry. J
Chlorolactic ether	$C_5 H_9 Cl O_3$	1.097, 0°	Wurtz. J

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Ethyl chloromalonate	$C_7 H_{11} Cl O_4$	1.185, 20°	Conrad and Bischoff. A. C. P. 209, 221.
Ethyl ethylchloromalonate.	$C_9 H_{15} Cl O_4$	1.110, 17°	Guthzeit. A. C. P. 209, 233.
Ethyl chlorisobutylmalonate.	$C_{11} H_{19} Cl O_4$	1.094, 15°	Conrad and Bischoff. Ber 13, 600.
" "	"	1.091, 15°	Guthzeit. A. C. P. 209, 237.
Succinyl chloride	$C_4 H_4 Cl_2 O_2$	1.39	Gerhardt and Chiozza. C. R. 36, 1052.
Chloromaleic ether	$C_8 H_{11} Cl O_4$	1.15, 11°	Henry. A. C. P. 156, 179.
" "	"	1.178, 20°	Frank. Ber. 10, 928.
Ethyl chloracetacetate	$C_6 H_9 Cl O_3$	1.19, 14°	Allihn. Ber. 11, 569.
Ethyl dichloracetacetate	$C_6 H_8 Cl_2 O_3$	1.293, 16°	Conrad. A. C. P. 186, 234.
Ethyl chloracetopropionate.	$C_7 H_{11} Cl O_3$	1.196, 21°	Conrad and Guthzeit. Ber. 17, 2287.
Ethyl monochlormethylacetacetate.	$C_7 H_{11} Cl O_3$	1.093, 15°	Isbert. A. C. P. 234, 160.
Ethyl dichlormethylacetacetate.	$C_7 H_{10} Cl_2 O_3$	1.2250, 17°	Isbert. Jena Inaug. Diss. 1866.
Ethyl monochlorethylacetacetate.	$C_8 H_{13} Cl O_3$	1.0523, 15°	Isbert. A. C. P. 234, 160.
Ethyl dichlorethylacetacetate.	$C_8 H_{12} Cl_2 O_3$	1.183, 15°	" "
Ethyldiethylchloracetacetate.	$C_{10} H_{17} Cl O_3$	1.063, 15°	James. J. C. S. 49, 50.
Ethyl diethyldichloracetacetate.	$C_{10} H_{16} Cl_2 O_3$	1.155, 15°	" "
Acetotrichlorethylidene acetic ether.	$C_8 H_9 Cl_3 O_3$	1.342, 15°	Matthews. J. C. S. 43, 203.
Monochlorhydrin	$C_3 H_7 Cl O_2$	1.31	Berthelot. J. 6, 456.
"	"	1.4, 13°	Henry. J. C. S. (2), 13, 346.
" β.	"	1.328, 0°	Hanriot. Ber. 10, 727.
Dichlorhydrin	$C_3 H_6 Cl_2 O$	1.37	Berthelot. J. 7, 449.
"	"	1.3699, 9°	Henry. A. C. P. 155, 324.
"	"	1.355, 17°.5	Gegerfeldt. Z. C. 13, 672.
"	"	1.383, 0°	Markownikoff. J. C. S. (2), 12, 241.
"	"	1.367, 19°	"
"	"	1.3799, 0°	Tollens. A. C. P. 156, 164.
"	"	1.3681, 11°.5	"
Epichlorhydrin	$C_3 H_5 Cl O$	1.204, 0°	Darmstaedter. J. 21, 454.
"	"	1.194, 11°	Reboul. J. 13, 456.
"	"	1.20313, 0°	Thorpe. J. C. S. 37, 371.
"	"	1.05667, 116°.55	"
"	"	1.0588 } 115°.8	Schiff. Ber. 14, 2768.
"	"	1.0598 } 115°.8	"
"	"	1.194, 11°	Cloëz. Ann. (6), 9, 145.
Ethyl monochlorhydrin	$C_5 H_{11} Cl O_2$	1.117, 11°	Henry. J. C. S. (2), 13, 346.

NAME.	FORMULA.	SP. GRAVITY.	AUTHOR.
Diethyl monochlorhydrin	$C_7\ H_{15}\ Cl\ O_2$	1.08, 10°.5	Alsberg. J.
" "	"	1.005, 17°	Reboul and çо. J. 14
Amyl monochlorhydrin	$C_8\ H_{17}\ Cl\ O_2$	1.00, 20°	Reboul. J.
Aceto-chlorhydrin	$C_5\ H_9\ Cl\ O_3$	1.27, 9°	Henry. J. C 13, 346.
Aceto-dichlorhydrin	$C_5\ H_8\ Cl_2\ O_2$	1.283, 11°	Truchot. J.
" "	"	1.274, 8°	Henry. Ber
Diaceto-chlorhydrin	$C_7\ H_{11}\ Cl\ O_4$	1.243, 4°	Truchot. J.
Butyro-dichlorhydrin	$C_7\ H_{12}\ Cl_2\ O_2$	1.194, 11°	"
Valero-dichlorhydrin	$C_8\ H_{14}\ Cl_2\ O_2$	1.149, 11°	"
Butenyl monochlorhydrin	$C_4\ H_9\ Cl\ O_2$	1.2324, 17°	Zikes. Ber. 438.
Butenyl dichlorhydrin	$C_4\ H_8\ Cl_2\ O$	1.274, 16°	"
Butenyl epichlorhydrin	$C_4\ H_7\ Cl\ O$	1.098, 15°	"
Diallyl dichlorhydrin	$C_6\ H_{12}\ Cl_2\ O_2$	1.4, 7°	Henry. Ber
α Chlorallyl alcohol	$C_3\ H_5\ Cl\ O$	1.164, 19°	Henry. B 3085.
β Chlorallyl alcohol	"	1.162, 15°	Romburgh. 245.
Methylchlorallylcarbinol	$C_5\ H_9\ Cl\ O$	1.08821, 14°.1	Garzarolli-T lackh. A. C 149.
Chlorcrotyl alcohol	$C_4\ H_7\ Cl\ O$	1.1812, 15°	Garzarolli-T lackh. I 2619.
Methyl chlorcrotonate	$C_5\ H_7\ Cl\ O_2$	1.143, 15°	Fröhlich. J.
" "	"	1.0933, 4°	Kahlbaum. 344.
Ethyl chlorcrotonate	$C_6\ H_9\ Cl\ O_2$	1.113, 15°	Fröhlich. J.
" "	"	1.129, 15°	Claus. A. C. 64.
Chlorethylacetylene tetracarbonic ether.	$C_{16}\ H_{23}\ Cl\ O_8$	1.076, 20°	Bischoff and Ber. 17, 2
Citraconyl chloride	$C_5\ H_4\ Cl_2\ O_2$	1.40, 15°	Gerhardt and za. J. 6.
" "	"	1.408, 16°.4	O. Strecker. 1640.
Propylphycite trichlorhydrin.	$C_3\ H_5\ Cl_3\ O$	1.4324, 14°	Wolff. Z. 465.
Dichloroleic acid	$C_{18}\ H_{32}\ Cl_2\ O_2$	1.082, 7°.9	Lefort. J. 6
Derivative of isobutyl alcohol.	C_{24} [illegible]	.967, 15°	Boquillon. 48.
Derivative of isohexic acid	$C_4\ H_4$ [illegible]	1.471, 10°	Demarçay. 380.
Chlorphenol	$C_6\ H_5\ Cl\ O$	1.306, 20°.5	Petersen and Predari. 157, 125.
Chlormethylphenol	$C_7\ H_7\ Cl\ O$	1.182, 9°	Henry. Z. 247.
Chlorparakresol		1.2106, 25°	Schall and Ber. 17, 25
Chlormethylparakresol	$C_8\ H_9\ Cl\ O$	1.1406, 25°	"
Chlorethylphenol		[illegible], 9°	Henry. Z. 247.
[illegible]	C_8 [illegible]	[illegible], 15°.5	Wroblevsky. 13, 164.
" [illegible]	"	1.131, 18°	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
thol	$C_{10} H_{11} Cl O$	1.1154, 0°	Ladenburg. Z. C. 12, 575.
	"	1.191, 20°	Landolph. C. R. 82, 227.
salicylol	$C_7 H_5 Cl O_2$	1.29, 8°	Henry. J. 22, 509.
rbenzoic acid	"	1.29	St. Evre. J. 1, 529.
tachlorbenzoate	$C_9 H_{10} Cl O_2$	.981, 10°	" "
thodichlorbenzo-	$C_9 H_8 Cl_2 O_2$	1.3278, 0°	Beilstein. Ber. 8, 435.
propyl benzoate	$C_{10} H_{11} Cl O_2$	1.172, 19°	Morley and Green. J. C. S. 47, 135.
"	"	1.149, 45°	
veofbenzoicether	$C_{18} H_{16} Cl_6 O_3$	1.346, 10°.8	Malaguti. Ann. (2), 70, 375.
monochloracetate	$C_9 H_9 Cl O_2$	1.2223, 4°	Seubert. Ber. 21, 281.
ichloracetate	$C_9 H_8 Cl_2 O_2$	1.3130, 4°	" "
richloracetate	$C_9 H_7 Cl_3 O_2$	1.3887, 4°	" "
chloride	$C_7 H_5 Cl O$	1.196	Wöhler and Liebig. A. C. P. 3, 262.
"	"	1.250, 15°	Cahours. J. 1, 532.
"	"	1.2324, 0°	Kopp. A. C. P. 95, 307.
"	"	1.2142, 19°	
"	"	.9857, 198°	Ramsay. J. C. S. 35, 463.
"	"	1.2122, 20°	Brühl. A. C. P. 235, 1.
cylic chloride	$C_7 H_4 Cl_2 O$	1.377	Emmerling. Ber. 8, 881.
loride	$C_8 H_7 Cl O$	1.175	Cahours. J. 11, 265.
tic chloride	"	1.16817, 20°	Anschütz and Berns. Ber. 20, 1390.
loride	$C_{10} H_{11} Cl O$	1.07, 15°	Cahours. J. 1, 534.
loride	$C_8 H_7 Cl O_2$	1.261, 15°	Cahours. J. 1, 538.
l chloride	$C_9 H_7 Cl O$	1.207, 16°	Cahours. J. 1, 535.
chloride	$C_8 H_4 Cl_2 O_2$	1.0489, 20°	Brühl. A. C. P. 235, 1.
etophenone	$C_8 H_6 Cl_2 O$	1.338, 15°	Gautier. Ber. 20, ref. 12.
cetophenone	$C_8 H_5 Cl_3 O$	1.427, 15°	" "
nzyl ethylate	$C_9 H_{11} Cl O$	1.121, 14°	Naquet. J. 15, 420.
nzylchlormalo-	$C_{14} H_{17} Cl O_4$	1.150, 19°	Conrad. Ber. 13, 2159.
hlorhydrin	$C_{10} H_{10} Cl_2 O_2$	1.441, 8°	Truchot. J. 18, 503.
henomalic acid	$C_7 H_7 Cl_3 O_5$	1.5	Carius. J. 1866, 561.
ethyl camphor-	$C_{24} H_{20} Cl_4 O_4$	1.386, 14°	Malaguti. Ann. (2), 70, 360.
chloride		1.1644	Carnelutti and Nasini Ber. 13, 2210.
reof bergamot oil	$6 (C_{10} H_{16}) \cdot 2 H Cl . H_2 O$	.896	Ohme. A. C. P. 31, 318.

LIII. COMPOUNDS CONTAINING C, CL, N, OR C, H

Name.	Formula.	Sp. Gravity.	Aut
Chloracetonitrile	C_2H_2ClN	1.204, 11°.2	Bisscho C. 20,
"	"	1.193, 20°	Engler.
Dichloracetonitrile	C_2HCl_2N	1.374, 11°.4	Bisscho C. 20,
Trichloracetonitrile	C_2Cl_3N	1.444	Dumas.
"	"	1.439, 12°.2	Bisscho C. 20,
Dichlorpropionitrile	$C_3H_3Cl_2N$	1.431, 15°	Otto. J
γ Chlorobutyronitrile	C_4H_6ClN	1.1620, 10°	Henry. 1158.
Dichlorethylamine	$C_2H_5Cl_2N$	1.2397, 5°	Tscherni 147.
"	"	1.2300, 15°	
Chloroxalmethylin	$C_4H_5ClN_2$	1.2473, 16°	Wall Schulz 424.
Chloroxalethylin	$C_6H_9ClN_2$	1.1420, 15°	Wallach.
"	"	1.142	Wallach er. B
Chloroxalpropylin	$C_8H_{13}ClN_2$	1.0900	Walla Schulz 424.
Orthochloraniline	C_6H_6ClN	1.2338, 0°	Beilstein tow.
Metachloraniline	"	1.2432, 0°	Beilstein tow. A 45.
Chlorotoluidine. B. 222°	C_7H_8ClN	1.151, 20°	Wroblew 12, 322
" B. 238°	"	1.1855, 20°	Wroblew 12, 684
" B. 237°—242°	"	1.203, 19°	"
" B. 236°	"	1.175, 18°	Henry a zewski 542.
Chlorpicoline	C_6H_6ClN	1.146, 20°	Ost. J.1 278.
Orthochlorchinoline	C_9H_6ClN	1.2752, 16°.2	Bodewig In. Di
"	"	1.2754, 16°.6	
Parachlorchinoline	"	1.3768, 14°.6	"
"	"	1.3766, 15°	
Chloride from methylura-cil.	$C_5H_3N_2Cl_3$	1.6273, 21°.8	Behrend 229, 2

LIV. COMPOUNDS CONTAINING C, CL, N, O, OR C, H, CL, N, O.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Chloronitromethane	$C H_2 Cl N O_2$	1.466, 15°	Tscherniak. Ber. 8, 609.
Dichlordinitromethane	$C Cl_2 N_2 O_4$	1.685, 15°	Marignac. Watts' Dict.
Chlorpicrin	$C Cl_3 N O_2$	1.6657	Stenhouse. J. 1, 540.
"	"	1.69225, 0°	Thorpe. J. C. S. 37, 371.
"	"	1.48444, 111°.9	
Dichloramyl nitrite	$C_5 H_9 Cl_2 N O_2$	1.233, 12°	Guthrie. J. 11, 404.
Trichloracetyl cyanide	$C_3 Cl_3 N O$	1.559, 15°	Hofferichter. J. P. C. (2), 20, 195.
Trichloracetic dimethylamide.	$C_4 H_6 Cl_3 N O$	1.441, 15°	Franchimont and Klobbie. Ber. 20, ref. 690.
Ethylene chloronitrin	$C_2 H_4 Cl N O_3$	1.378, 21°	Henry. Ann. (4), 27, 243.
Propylene chloronitrin	$C_3 H_6 Cl N O_3$	1.28, 12°	" "
Dichlormethoxylacetonitril.	$C_3 H_3 Cl_2 N O$	1.3885	Bauer. A. C. P. 229, 163.
Dichlorethoxylacetonitril	$C_4 H_5 Cl_2 N O$	1.3394, 15°.5	" "
Dichlorpropoxylacetonitril.	$C_5 H_7 Cl_2 N O$	1.2382, 15°.5	" "
Dichlorisobutoxylacetonitril.	$C_6 H_9 Cl_2 N O$	1.1226, 15°.5	" "
Monochlordinitrin	$C_3 H_5 Cl N_2 O_6$	1.5112, 9°	Henry. A. C. P. 155, 168.
Dichlormononitrin	$C_3 H_5 Cl_2 N O_3$	1.465, 10°	" "
Chlorazol	$C_4 H_3 Cl_3 N_2 O_4$	1.555	Mühlhaüser. J. 7, 671.
Dichlornitrophenol	$C_6 H_3 Cl_2 N O_3$	1.59	Fischer. A. C. P., 7th Supp., 185.
Chlornitrobenzene	$C_6 H_4 Cl N O_2$	1.377, 0°	Sokoloff. J. 19, 552.
"	"	1.358, 0°	" "
"	"	1.368, 22°	Jungfleisch. J. 21, 345.
" Meta	"	1.534	Schröder. Ber. 13, 1070.
" Para	"	1.380, 22°	Jungfleisch. J. 21, 343.
Chlordinitrobenzene	$C_6 H_3 Cl N_2 O_4$	1.697, 22°	Jungfleisch. J. 21, 345.
"	"	1.6867, 16°.5	Jungfleisch. J. 21, 346.
"	"	1.72, 18°	Engelhardt and Latschinoff. Z. C. 13, 232.
Dichlornitrobenzene	$C_6 H_3 Cl_2 N O_2$	1.669, 22°	Jungfleisch. J. 21, 348.
Trichlornitrobenzene	$C_6 H_2 Cl_3 N O_2$	1.790, 22°	Jungfleisch. J. 21, 351.
Dichlordinitrobenzene	$C_6 H_2 Cl_2 N_2 O_4$	1.7108, 16°	Jungfleisch. J. 21, 348.
Trichlordinitrobenzene	$C_6 H Cl_3 N_2 O_4$	1.850, 25°	Jungfleisch. J. 21, 352.

Name.	Formula.	Sp. Gravity.	Authority.
Tetrachlornitrobenzene	$C_6 H Cl_4 N O_2$	1.744, 25°	Jungfleisch. 353.
Pentachlornitrobenzene	$C_6 Cl_5 N O_2$	1.718, 25°	Jungfleisch. 354.
Chlornitrotoluene	$C_7 H_6 Cl N O_2$	1.307, 18°	Wroblevsky. 12, 683.
"	"	1.3259, 18°	"
"	"	1.300, 20°	Wroblevsky. 7, 1062.
Parachlormetanitrotoluene.	"	1.297, 22°	Gatterman Kaiser. B 2600.
Dichlornitrotoluene	$C_7 H_5 Cl_2 N O_2$	1.455, 17°	Wroblevsk Pirogoff. 208.
Derivative of acetanilide	$C_8 H_6 Cl_3 N O_2$	1.3893, 20°	Witt. Ber. 8
Derivative of protein	$C_{12} H_{11} Cl_3 N O_2$	1.628	Mühlhäuser. 671.
" " "	$C_{12} H_{12} Cl_3 N O_4$	1.360	"

LV. COMPOUNDS CONTAINING C, H, AND BR.

1st. Bromides of the Paraffin Series.

Name.	Formula.	Sp. Gravity.	Authority.
Methyl bromide	$C H_3 Br$	1.66443, 0°	Pierre. C. R.
" "	"	1.732 } 0°	Twolots. Me P. C. (2), 1
" "	"	1.7116 } 0°	
" "	"	1.73306, 15°	Perkin. J. P. 31, 481.
" "	"	1.72345, 25°	
" "	"	1.46576, 15°	Weegmann. 2, 218.
" "	"	1.45967, 18°	
" "	"	1.45554, 20°	
" "	"	1.45349, 21°	
" "	"	1.44733, 24°	
" "	"	1.44122, 27°	
Ethyl bromide	$C_2 H_5 Br$	1.40	Löwig. A. 292.
" "	"	1.47329, 0°	Pierre. C. R.
" "	"	[illegible], 20°	Haagen. P. 117.
" "	"	1.4621, 9°	Dehn. A. C. Supp., 85.
" "	"	1.4685, 13°.5	Linnemann. P. 160, 1
" "	"	1.4189, 15°	Mendelejeff.
" "	"	1.4775, 5°–10°	Regnault.
" "	"	1.4679, 10°–15°	ge i
" "	"	1.4582, 15°–20°	
" "	"	1.47, 15°	G

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
bromide	C_2H_5Br	1.4069, 20°	Naumann. Ber. 10, 2016.
"	"	1.4579, 14°	De Heen. Bei. 5, 105.
"	"	1.4134, 38°.4	Schiff. Ber. 19, 560.
"	"	1.44988, 15°	Perkin. J. P. C. (2),
"	"	1.43250, 25°	31, 481.
l bromide	C_3H_7Br	1.353, 16°	Chapman and Smith. J. 22, 360.
"	"	1.388, 0°	Rossi. A. C. P. 159, 79.
"	"	1.3497, 0°	
"	"	1.301, 30°.15	Pierre and Puchot.
"	"	1.2589, 54°.2	Ann. (4), 22, 284.
"	"	1.3577, 16°	Linnemann. A. C. P. 161, 40.
"	"	1.3520 } 20°	Brühl. A. C. P.
"	"	1.3529 }	203, 1.
"	"	1.3617, 14°	De Heen. Bei. 5, 115.
"	"	1.3835, 0°	Zander. A. C. P. 214,
"	"	1.2639, 71°	181.
"	"	1.36110, 15°	Perkin. J. P. C. (2),
"	"	1.34739, 25°	31, 481.
pyl bromide	"	1.320, 13°	Linnemann. J. 18, 489.
"	"	1.33, 21°	Linnemann.
"	"	1.248, 20°	Linnemann. A. C. P. 161, 18.
"	"	1.2997 }	
"	"	1.3097 } 20°	Three lots. Brühl. A. C. P. 203, 1.
"	"	1.3117 }	
"	"	1.3397, 0°	Zander. A. C. P.
"	"	1.2368, 60°	214, 181.
"	"	1.31978, 15°	Perkin. J. P. C. (2),
"	"	1.30522, 25°	31, 481.
bromide	C_4H_9Br	1.305, 0°	
"	"	1.2792, 20°	Lieben and Rossi.
"	"	1.2571, 40°	A. C. P. 158, 137.
"	"	1.2990, 20°	Linnemann. Ann. (4), 27, 268.
"	"	1.2605, 14°	De Heen. Bei. 5, 105.
tyl bromide	"	1.274, 16°	Wurtz. J. 7, 572.
"	"	1.2702, 16°	Chapman and Smith. J. C. S. 22, 153.
"	"	1.249, 0°	
"	"	1.191, 40°.2	Pierre and Puchot.
"	"	1.1408, 73°.5	Ann. (4), 22, 314.
"	"	1.2038, 16°	Linnemann. A. C. P. 162, 1.
"	"	1.1456, 90°.5	Schiff. Bei. 9, 559.
"	"	1.27221, 15°	Perkin. J. P. C. (2),
"	"	1.25984, 25°	31, 481.
thylcarbyl bromide	"	1.215, 20°	Roozeboom. Ber. 14, 2396.
"	"	1.20200, 15°	Perkin. J. P. C. (2),
"	"	1.18922, 25°	31, 481.
[illegible] bromide	$C_5H_{11}Br$	1.246, 0°	
"	"	1.2234, 20°	Lieben and Rossi.
"	"	1.2044, 40°	A. C. P. 159, 70.

NAME.	FORMULA.	SP. GRAVITY.	AUTHO[RITY]
Amyl bromide	$C_5H_{11}Br$	1.16576, 0°	Pierre. C.
" "	"	1.217, 16°	Chapm[an and] Smith. J
" "	"	1.2045, 20°	Haagen. [P] 117.
" "	"	1.2059, 15°.7	Mendelejeff
" "	"	1.0502, 120°	Ramsay. 35, 463.
" "	"	1.2002, 14°	De Heen. B
" "	"	1.0126 } 117°.1	Schiff. 2766.
" "	"	1.0127 } 117°.1	
" "	"	1.2058, 22°	Lachowicz. 220, 171.
" "	"	1.0881, 118°.5	Schiff. Ber
" " Active	"	1.225, 15°	Le Bel. B 546.
" " Inactive	"	1.2358, 0°	Balbiano. 1437.
" "	"	1.21927, 15°	Perkin. J. 31, 481.
" "	"	1.20834, 25°	
Normal hexyl bromide	$C_6H_{13}Br$	1.1935, 0°	Lieben and J. R. C.
" " "	"	1.1725, 20°	
" " "	"	1.1561, 40°	
Normal heptyl bromide	$C_7H_{15}Br$	1.133, 16°	Cross. J. 123.
Secondary heptyl bromide	"	1.422, 17°.5	Venable. 1650.
Normal octyl bromide	$C_8H_{17}Br$	1.116, 16°	Zincke. J
" " "	"	1.11798, 15°	Perkin. J (2), 31, 4
" " "	"	1.10993, 25°	
Secondary octyl bromide	"	1.0989, 22°	Lachowicz. 220, 185.

2d. Bromides of the Series $C_n H_{2n} Br_2$.

NAME.	FORMULA.	SP. GRAVITY.	AUTHO[RITY]
Methylene bromide	CH_2Br_2	2.0844, 11°.5	Steiner. B
" "	"	2.4930, 0°	Henry. An 266.
" "	"	2.49850 } 15°	Perkin. (2), 32,
" "	"	2.499922 } 15°	
" "	"	2.47849 } 25°	
" "	"	2.47745 } 25°	
Ethylene bromide	$CH_2Br.CH_2Br$	2.164, 21°	Regnault. 59, 358.
" "	"	2.128, 13°	D'Arcet. 5, 28.
" "	"	2.16292, 20°.1	Pierre.
" "	"	2.179	[illegible]
" "	"	2.1827, 20°	[illegible]

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
ı bromide	$CH_2 Br . CH_2 Br$	2.198, 10°	Reboul. Z. C. 13, 200.
"	"	2.21324, 0°	Thorpe. J. C. S. 37, 371.
"	"	1.93124, 131°.45	
"	"	2.1785, 20°	Anschütz. A. C. P. 221, 133.
"	"	2.1767, 21°.5	
"	"	1.9246, 130°.3	Schiff. Ber. 19, 560.
"	"	2.18895, 15°	Perkin. J. P. C. (2), 32, 523.
"	"	2.17271, 25°	
"	"	2.17197, 25°	
"	"	2.17681, 20°	Weegmann. Z. P. C. 2, 218.
ıne bromide	$CH_3 . CH Br_2$	2.135, 0°	Caventou. J. 14, 608.
"	"	2.129, 10°	Reboul. Z. C. 13, 200.
"	"	2.132, 10°	
"	"	2.0822, 21°.5	Anschütz. A. C. P. 221, 133.
"	"	2.10006, 17°.5	Angelbis Freiburg Inaug. Diss. 1884.
"	"	2.08905, 20°.5	
"	"	2.10297, 15°	Perkin. J. P. C. (2), 32, 523.
"	"	2.08540, 25°	
"	"	2.05545, 20°	Weegmann. Z. P. C. 2, 218.
ylene bromide	$CH_2 Br . CH_2 . CH_2 Br$	2.0177, 0°	Geromont. A. C. P. 158, 370.
"	"	1.9839, 13°.5	Reboul. J. C. S. 36, 127.
"	"	1.9228	Freund. Ber. 14, 2270.
"	"	2.0060, 0°	Zander. A.C.P. 214, 181.
"	"	1.7101, 165°	
"	"	1.98236, 15°	Perkin. J. P. C. (2), 32, 523.
"	"	1.96836, 25°	
ne bromide	$CH_3 . CH Br . CH_2 Br$	1.7	Reynolds. J. 3, 495.
"	"	1.974	Cahours. J. 3, 496.
"	"	1.955, 9°	Reboul. Z. C. 13, 200.
"	"	1.954, 15°	Linnemann. A. C. P. 136, 58.
"	"	1.950, 16°	
"	"	1.943, 17°	Linnemann. A. C. P. 138, 123.
"	"	1.972, 0°	Erlenmeyer. A. C. P. 139, 226.
"	"	1.946, 17°	
"	"	1.9586, 0°	Two products. Friedel and Ladenburg. B. S. C. 8, 146.
"	"	1.9256, 20°	
"	"	1.9710, 0°	
"	"	1.9383, 20°	
"	"	1.9463, 17°	Linnemann. A. C. P. 161, 42.
"	"	1.9465, 15°	
"	"	1.9617, 0°	Zander. A. C. P. 214, 181.
"	"	1.6944, 141°.7	
"	"	1.8893, 18°	Gladstone. Bei. 9, 249.
"	"	1.910, 21°	
"	"	1.94426, 15°	Perkin. J. P. C. (2), 32, 523.
"	"	1.94474, 15°	
"	"	1.93004, 25°	
"	"	1.98080, 25°	

NAME.	FORMULA.	SP. GRAVITY.	AUTH
Dimethylmethylene bromide. Methylbromacetol.	$CH_3.CBr_2.CH_3$	1.8149, 0°	Friedel and ...burg. 8, 150.
" "	"	1.7825, 20°	
" "	"	1.895, 9°	Reboul. 200.
" "	"	1.875, 10°	Reboul.
" "	"	1.84761, 15°	Perkin. J 32, 523.
" "	"	1.83140, 25°	
α Butylene bromide	$C_2H_5.CHBr.CH_2Br$	1.876, 0°	Wurtz.
" "	"	1.8503, 0°	Grabow... Saytz... P. 179
" "	"	1.8204, 20°	
β Butylene bromide	$CH_3.(CHBr)_2.CH_3$	1,8299 0°	Wurtz.
" "	"	1.8119 0°	
" "	"	1.8058, 0°	Puchot. 28, 543.
" "	"	1.7215, 50°.3	
" "	"	1.6378, 100°	
" "	"	1.74848 15°	Perkin. (2), 3...
" "	"	1.75586 15°	
" "	"	1.73083 25°	
" "	"	1.74294 25°	
Isobutylene bromide	$C_4H_8Br_2$	1.798, 14°	Two samp... nemann 162, 1.
" "	"	1.809, 17°	
" "	"	1.808, 24°	Studer. 2188.
Ethylmethylethylene bromide.	$C_2H_5.(CHBr)_2.CH_3$	1.7087, 0°	Wagner... eff. A. 308.
" "	"	1.6808, 14°	
Isoamylene bromide	$C_5H_{10}Br_2$	1.3443, 0°	Helbing. 172, 281
" "	"	1.656, 21°	Gladstone. 249.
" "	"	1.63699 15°	Perkin. (2), 3...
" "	"	1.64000 15°	
" "	"	1.62595 25°	
" "	"	1.62921 25°	
Hexylene bromide	$C_6H_{12}Br_2$	1.582, 15°	Pelouze ... hours.
" "	"	1.5975, 18°	Thorpe an... A. C. P
" "	"	1.5877, 20°	
" "	"	1.8058, 0°	Hecht an... A. C. P
" "	"	1.5809, 19°	
" "	"	1.6437, 0°	Helbing. 172, 281
Heptylene bromide	$C_7H_{14}Br_2$	1.5145, 18°.5	Thorpe an... A. C. P

3d. Miscellaneous Non-Aromatic Bromides.

Name.	Formula.	Sp. Gravity.	Authority.
m	$CHBr_3$	2.13	Löwig. A. C. P. 3, 296.
	"	2.9, 12°	Cahours. J. 1, 501.
	"	2.775, 14°.5	Schmidt. Ber. 10, 194.
	"	2.83185, 8°.56	Thorpe. J. C. S. 37, 201 and 371.
	"	2.48611, 151°.2	"
	"	2.90246, 15°	Perkin. J. P. C. (2), 32, 523.
	"	2.90450, 15°	"
	"	2.88258, 25°	"
	"	2.88421, 25°	"
lene dibromide	$CH_2Br.CHBr_2$	2.620, 23°	Wurtz. J. 10, 461.
"	"	2.663, 0°	Simpson. J. 10, 461.
"	"	2.659, 0°	Caventou. J. 14, 608.
"	"	2.624, 16°	Tawildarow. A. C. P. 176, 21.
"	"	2.65, 0°	Demole. Ber. 9, 49.
"	"	2.6189, 17°.5	Anschütz. A. C. P. 221, 61.
"	"	2.6107, 21°.5	"
"	"	2.57896, 20°	Weegmann. Z. P. C. 2, 218.
ethane	$CH_2Br.CBr_3$	2.88, 22°	Reboul. Z. C. 13, 200.
	"	2.93	Bourgoin. J. C. S. 32, 443.
	"	2.9292, 17°.5	Anschütz. A. C. P. 221, 133.
	"	2.9216, 21°.5	"
	"	2.88249, 16°.6	Weegmann. Z. P. C. 2, 218.
	"	2.87687, 19°.1	"
	"	2.87482, 20°	"
	"	2.87214, 21°.2	"
	"	2.86512, 24°.3	"
	"	2.85886, 27°.3	"
	"	2.85189, 30°.2	"
tetrabromide	$CHBr_2.CHBr_2$	2.848, 21°.5	Sabanejeff. A. C. P. 178, 114.
"	"	2.9469, 17°.5	Anschütz. Ber. 12, 2075.
"	"	2.9517, 17°.5	"
"	"	2.9708, 17°.5	Anschütz. A. C. P. 221, 133.
"	"	2.9712, 17°.5	"
"	"	2.9629, 21°.5	"
"	"	2.92011, 17°.5	Eltzbacher. Bonn Inaug. Diss. 1884.
"	"	2.96725, 20°	Weegmann. Z. P. C. 2, 218.
lene, or vinyl	C_2H_3Br	1.52	Watts' Dictionary.
"	"	1.5286, 11°	Anschütz. A. C. P. 221, 133.
"	"	1.5167, 14°	"
"	"	1.52504, 9°.6	Perkin. J. P. C. (2), 32, 523.
[illegible]	$C_2H_3Br_3$	3.033, 10°	Sawitsch. J. 13, 431.
	"	3.053, 14°.5	"
		2.1780, 20°.6	Anschütz. A. C. P. 221, 133.

NAME.	FORMULA.	SP. GRAVITY.	AUTH
Acetylene dibromide	$C_2 H_2 Br_2$	2.120, 17°	Tawildar P. 178,
" "	"	2.2028, 22°.7	Sabanejef 27, 371.
" "	"	2.268, 0°	Plimpton. 1812.
" "	"	2.271, 0°	Sabanejef 1220.
" "	"	2.228, 19°	
" "	"	2.2714, 17°.5	Anschütz 221, 18
" "	"	2.2988, 0°	Weger. 221, 6
" "	"	2.0852, 110°.5	
" "	"	2.22889, 20°	Weegma 2, 218.
Tribromethylene	$C_2 H Br_3$	2.68762, 20°	"
Tribrompropane	$CH_3. CBr_2. CH_2 Br$	2.336	Cahours.
"	"	2.392, 23°	Wurtz.
"	"	2.39, 10°	Linnema 490.
"	"	2.38, 12°	Reboul. 127.
"	$CH_3. CHBr. CHBr_2$	2.356, 18°	Reboul. 317.
Tribromhydrin	$CH_2Br. CHBr. CH_2Br$	2.436, 23°	Wurtz.
"	"	2.966, 0°	Perrot.
"	"	2.407, 10°	Henry. 154, 37
"	"	2.41844, 15°	Perkin. J 32, 523.
"	"	2.39856, 25°	
Tetrabrompropane	$C_3 H_4 Br_4$	2.469	Cahours.
Allylene tetrabromide	$C H_3. C Br_2. C H Br_2$	2.94, 0°	Oppenhei 498.
Tetrabromglycide	$CHBr_2. CHBr. CH_2Br$	2.64	Reboul.
Pentabrompropane	$C_3 H_3 Br_5$	2.601	Cahours.
α Brompropylene	$C_3 H_5 Br$	1.364, 19°.5	Reboul. 317.
"	"	1.39, 9°	Reboul. 127.
"	"	1.42077, 15°	Perkin. J 32, 523.
"	"	1.40527, 25°	
β Brompropylene	"	1.400, 13°	Linnema P. 136,
"	"	1.410, 14°	
"	"	1.406, 19°	Linnema 306.
"	"	1.4110, 15°	Linnema P. 161,
"	"	1.428, 19°.5	Reboul. 317.
Allyl bromide	"	1.472	Cahours.
" "	"	1.451, 0°	Tollens. 185.
" "	"	1.4355, 15°	
" "	"	1.3909, 62°	
" "	"	1.4507, 0°	Tollens ger.
" "	"	1.461, 0°	Tollens. 156,
" "	"	1.436, 15°	Zander
" "	"	1.4593, 0°	
" "	"	1.3333, 70°.5	

Name.	Formula.	Sp. Gravity.	Authority.
Allyl bromide	C_3H_5Br	1.396, 20°.5	Gladstone. Bei. 9, 249.
" "	"	1.3867, 24°.5	
" "	"	1.3980, 20°	Brühl. A. C. P. 235, 1.
" "	"	1.42532, 15°	Perkin. J. P. C. (2), 32, 523.
" "	"	1.41057, 25°	
Epidibromhydrin	$C_3H_4Br_2$	2.06, 11°	Reboul. J. 13, 461.
Allylene bromide	"	1.950	Cahours. J. 3, 496.
" "	"	2.05, 0°	Oppenheim. J. 17, 493.
" "	"	2.00, 15°	Borsche and Fittig. J. 18, 314.
" "	"	1.98, 15°	Linnemann. J. 18, 490.
Propargyl tribromide	$C_3H_3Br_3$	2.53, 10°	Henry. Ber. 7, 761.
Propargyl bromide	C_3H_3Br	1.52, 20°	Henry. B. S. C. 20, 452.
" "	"	1.59, 11°	Henry. Ber. 7, 761.
Propargyl pentabromide	$C_3H_3Br_5$	3.01, 10°	" "
Tribromisobutane	$C_4H_7Br_3$	2.187, 17°	Norton and Williams. A. C. J. 9, 88.
Bromamylene	C_5H_9Br	1.22, 19°	Linnemann. Z. C. 11, 58.
Isoprene bromide	"	1.175, 15°	Bouchardat. J. C. S. 38, 323.
Isoprene dibromide	$C_5H_8Br_2$	1.601, 15°	" "
Bromhexylene. B. 99°–100°.	$C_6H_{11}Br$	1.35, 12°	Destrem. Ann. (5), 27, 50.
" B. 138°	"	1.17, 15°	Reboul and Truchot. J. 20, 587.
" B. 140°	"	1.2205, 0°	Hecht and Strauss. A. C. P. 172, 62.
"	"	1.2025, 15°	
Hexine dibromide	$C_6H_{10}Br_2$	1.6977, 0°	Hecht. Ber. 11, 1054.
" "	"	1.5543, 100°	
Hexine tetrabromide	$C_6H_{10}Br_4$	2.1625, 0°	" "
Dibromdiallyl	$C_6H_8Br_2$	1.656	Henry. J. C. S. (2), 11, 1215.
Dipropargyl tetrabromide	$C_6H_6Br_4$	2.464, 19°	Henry. Ber. 7, 761.
Cumylene bromide	$C_8H_{14}Br_2$	1.5679, 16°.25	Wertheim. J. 15, 367.
Bromdecylene	$C_{10}H_{19}Br$	1.109, 15°	Reboul and Truchot. J. 28, 588.
Isovinyl bromide	$(C_2H_3Br)_n$	2.075	Baumann. A. C. P. 163, 308.
Erythrene hexbromide	$C_4H_4Br_6$	2.9, 15°, 1	Colson. B. S. C. 48, 52. Two modifications.
" "	"	3.4, solid	

4th. Aromatic Compounds.

Name.	Formula.	Sp. Gravity.	Autho
Brombenzene	C_6H_5Br	1.519 } 0°	Ladenburg 1085.
"	"	1.522 } 0°	
"	"	1.51768, 0°	Adriaenz. 444.
"	"	1.50286, 11°.46	
"	"	1.48977, 20°.96	
"	"	1.41168, 77°.76	
"	"	1.4914, 20°	Brühl. B
"	"	1.5203, 0°	Weger. 221, 61.
"	"	1.3080, 155°.6	
"	"	1.4958, 16°	Gladstone. 249.
"	"	1.49225, 23°	
"	"	1.3080, 155°	Schiff. Be
"	"	1.3090, 156°	Schiff. Ber
Orthodibrombenzene	$C_6H_4Br_2$	2.003, 0°	Körner. J. 1, 214.
"	"	1.858, 99°	
Metadibrombenzene	"	1.955, 18°.6	"
Paradibrombenzene	"	2.218 } 4°	Schröder. 561.
"	"	2.222 } 4°	
"	"	1.8408, 89°.3	Schiff. A. (247.
Benzyl bromide	$C_6H_5.CH_2Br$	1.438, 22°	Kekulé. J
Orthobromtoluene	$C_6H_4.CH_3.Br$	1.4092, 21°.5	Glinzer an J. 18, 58
"	"	1.4109, 22°	Kekulé. J.
"	"	1.401, 18°	Wroblevsk P. 168, 1
"	"	1.2031, 182°.5	Schiff. Ber
Metabromtoluene	"	1.4009, 21°	Wroblevsk 13, 239.
Parabromtoluene	"	1.3999, 30°	Hübner an Z. C. 14,
Dibromtoluene. B. 236°	$C_6H_3.CH_3.Br_2$	1.8127, 19°	Wroblevsk 13, 239.
" B. 238°-239°	"	1.812, 19°	"
" B. 246°	"	1.812, 22°	Wroblevsk 14, 272.
Ethylbrombenzene. 1.4	$C_6H_4.C_2H_5.Br$	1.34, 18°.5	Fittig and J. 20, 60
Bromxylene	$C_6H_3.CH_3.CH_3.Br$	1.385, 21°	Beilstein. J
" 1.2.4	"	1.3698, 15°	Jacobsen. 2373.
" 1.3.5	"	1.362, 20°	Wroblevsk P. 192, 2
Metaxylyl bromide	$C_6H_4.CH_3.CH_2Br$	1.3711, 23°	Radziszew Wispek. 1745.
Orthoxylyl bromide	"	1.3811, 23°	Radziszew Wispek. 1747.
Dibromorthoxylene	$C_6H_2.(CH_3)_2Br_2$	1.7842, 15°	Jacobsen. 2377.
Orthoxylylene bromide	$C_6H_4(CH_2Br)_2$	1.934, 0°, s.	Colson. A 86.
" "	"	1.680, 95°, l.	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
oxylylene bromide	$C_6 H_4 (C H_2 Br)_2$	1.988	Colson. C. R. 104, 429.
axylylene bromide	"	1.734, 0°, s.	Colson. Ann. (6), 6, 86.
" "	"	1.615, 80°, l.	
" "	"	1.959	Colson. C. R. 104, 429.
raxylylene bromide	"	2.010, s.	Colson. Ann. (6), 6, 86.
" "	"	1.850, 155°, l.	
" "	"	2.012	Colson. C. R. 104, 429.
mesitylene. 1.3.5.6	$C_6 H_2 (C H_3)_3 . Br$	1.3191, 10°	Fittig and J. Storer, J. 20, 704.
pylbrombenzene. 1.4.	$C_6 H_4 . C_3 H_7 . Br$	1.3223, 13°	Meusel. J. 20, 698.
" "	"	1.3014, 15°	Jacobsen. Ber. 12, 430.
mcymene	$C_{10} H_{12} Br_2$	1.596	Claus and Wimmel. Ber. 13, 903.
mamylbenzene	$C_{11} H_{15} Br$	1.2834, 21°	Dafert. M. C. 4, 621.
ene hexbromide	$C_6 H_6 Br_6$	2.5+	Meunier. Ann. (6), 10, 223.
dibenzyl	$C_{14} H_{13} Br$	1.318, 9°	Stelling and Fittig.
naphthalene	$C_{10} H_7 Br$	1.555	Glaser. J. 18, 562.
"	"	1.503, 12°	Wahlforss. J. 18, 564.
"	"	1.48875, 16°.5	Nasini and Bernheimer. G. C. I. 15, 50.
"	"	1.47496, 28°.1	
"	"	1.42572, 77°.6	
"	"	1.5678, 16°.5	Gladstone. Bei. 9, 249.
"	"	1.5403, 17°	
"	"	1.5403, 18°	
" β	"	1.605, 0°	Roux. B. S. C. 45, 514.
trabromhydrocamphene.	$C_{10} H_{14} Br_4$	2.2042	Royère. Ber. 19, ref. 438.
etrabromhydrocamphene.	"	1.93711	" "

LVI. COMPOUNDS CONTAINING C, H, O, AND BR.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Dibrompropyl alcohol	$C_3 H_6 Br_2 O$	2.1682, 0°	Weger. A. C. P. 221, 61.
" "	"	1.7535, 219°	
obromtrimethylcarbinol.	$C_4 H_9 Br O$	1.429, 0°	Guareschi and Garzino. J. C. S. 54, 437.
ombexyl alcohol	$C_6 H_{12} Br_2 O$	1.99, 15°	Destrem. Ann. (5), 27, 50.
methyl oxide	$C_4 H_9 Br O$	1.3704, 0°	Henry. C. R. 100, 1007.
nacetyl bromide	$C_2 H_2 Br_2 O$	2.317, 21°.5	Naumann. J. 17, 322.
pionyl bromide	$C_3 H_5 O . Br$	1.465, 14°	Sestini. J. 22, 528.

NAME.	FORMULA.	SP. GRAVITY.	AUTH
Dibromacetic acid	$C_2 H_2 Br_2 O_2$	2.25	Perkin a J. 11, 1
Bromobutyric acid	$C_4 H_7 Br O_2$	1.54, 15°	Schneider 457.
Bromisobutyric acid	"	1.5225, 60° }	Hell and V Ber. 10,
" "	"	1.500, 100° }	
Dibromobutyric acid	$C_4 H_6 Br_2 O_2$	1.97	Schneider 458.
Bromostearic acid	$C_{18} H_{35} Br O_2$	1.0653, 20°	Oudeman C. 89, 1
Ethyl bromacetate	$C_4 H_7 Br O_2$	1.5250, 18°	Gladstone 249.
Dibromethyl acetate	$C_4 H_6 Br_2 O_2$	1.962, 17°	Kessel. 1906.
Ethyl brompropionate	$C_5 H_9 Br O_2$	1.396, 11°	Henry. 156, 17
Methyl dibrompropionate. α.	$C_4 H_6 Br_2 O_2$	1.9048, 0° }	Philippi. Inaug.
" "	"	1.8978, 12° }	
" " αβ	"	1.9777, 0°	} Weger. 221, 61
" " "	"	1.6140, 205°.8	}
Ethyl dibrompropionate. α	$C_5 H_8 Br_2 O_2$	1.7728, 0° }	Philippi. aug. Di
" "	"	1.7586, 12° }	
" " β	"	1.796, 0° }	Münderm A. C. P.
" " "	"	1.777, 15° }	
" " αβ	"	1.8284 } 0°	} Weger. 221, 61
" " "	"	1.8279 } 0°	}
" " "	"	1.4554, 214°.6	}
Propyl dibrompropionate.	$C_6 H_{10} Br_2 O_2$	1.6842, 0° }	Philippi. aug. Di
" " α	"	1.6682, 12° }	
" " αβ	"	1.7014, 0° }	Weger. 221, 61.
" " "	"	1.3391, 238° }	
Butyl dibrompropionate. α	$C_7 H_{12} Br_2 O_2$	1.6008, 0° }	Philippi. aug. Di
" " "	"	1.5778, 12° }	
Methyl brombutyrate. γ	$C_5 H_9 Br O_2$	1.450, 5°	Henry. C 368.
Ethyl brombutyrate	$C_6 H_{11} Br O_2$	1.33, 15°	Schneider.
" "	"	1.345, 12°	Cahours.
" " γ	"	1.363, 5°	Henry. C 368.
Ethyl bromisobutyrate	"	1.328, 0° }	Hell and V Ber. 7,
" "	"	1.300, 19°.5 }	
Ethyl bromvalerate. α	$C_7 H_{13} Br O_2$	1.226, 18°	Juslin. Be
Ethyl bromethylmethylacetate. α.	"	1.2275, 18°	Böcking. 204, 24.
Bromal	$C_2 H Br_3 O$	3.34	Löwig. A 305.
Parabromalide	"	3.107	Cloëz. J.
Bromacetone	$C_3 H_5 Br O$	1.99	Sokolowsk 27, 371.
Dibromacetone	$C_3 H_4 Br_2 O$	2.5	"
Hexbromethylmethyl ketone.	$C_4 H_2 Br_6 O$	2.88, 0°	Demole. 1712.
Ethylene bromhydrin	$C_2 H_4 . Br. O H$	1.66, 8°	Henry. A 242.
Bromethylene bromhydrin	$C_2 H_3 Br. Br. O H$	2.35, 0°	Demole.
Bromethylene bromacetin	$C_2 H_3 Br. Br. C_2 H_3 O_2$	1.98, 0°	Demole.
Ethylidene bromethylate	$C_2 H_4 . Br. O C_2 H_5$	1.0632, 12°	Henry. [illegible]

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Trimethylene bromhydrin	$C_3\,H_6.\,Br.\,O\,H$	1.5374, 20°	Frühling. Ber. 15, 2622.
Ethoxybromamylene	$C_5\,H_8\,Br.\,O\,C_2\,H_5$	1.23, 19°	Reboul. J. 17, 507.
Hexylene bromhydrin	$C_6\,H_{12}.\,Br.\,O\,H$	1.2959, 11°	Henry. C. R. 97, 260.
Ethyl bromacetacetate	$C_6\,H_9\,Br\,O_3$	1.511, 22°	Duisberg. Ber. 15, 1378.
Ethyl dibromacetacetate	$C_6\,H_8\,Br_2\,O_3$	1.884, 25°	" "
Ethyl tribromacetacetate	$C_6\,H_7\,Br_3\,O_3$	2.144, 22°	" "
Ethyl tetrabromacetacetate.	$C_6\,H_6\,Br_4\,O_3$	2.401, 17°	" "
Dibromide of dibromacetacetic ether.	$C_6\,H_8\,Br_4\,O_3$. ?	2.320, 21°	Conrad. A. C. P. 186, 233. Compare Ber. 15, 2133.
Ethyl bromethylacetacetate.	$C_8\,H_{13}\,Br\,O_3$	1.354	Wedel. A. C. P. 219, 102.
Ethyl dibromethylacetacetate.	$C_8\,H_{12}\,Br_2\,O_3$	1.635	Wedel. A. C. P. 219, 103.
Ethyl tribromethylacetacetate.	$C_8\,H_{11}\,Br_3\,O_3$	1.860	" "
Ethyl β bromacetopropionate.	$C_7\,H_{11}\,Br\,O_3$	1.439, 15°	Conrad and Guthzeit. Ber. 17, 2286.
Ethyl brompropiopropionate.	$C_8\,H_{13}\,Br\,O_3$	1.337, 15°	Israel. A. C. P. 231, 197.
Ethyl dibrompropiopropionate.	$C_8\,H_{12}\,Br_2\,O_3$	1.611, 15°	" "
Bromallyl alcohol	$C_3\,H_5\,Br\,O$	1.6, 15°	Henry. B. S. C. 18, 232.
Bromallyl acetate	$C_5\,H_7\,Br\,O_2$	1.57, 12°	" "
Allyldibrompropionate. β.	$C_6\,H_8\,Br_2\,O_2$	1.843, 0°	Münder and Tollens. A. C. P. 167, 222.
" "	"	1.818, 20°	
Dibromallyl oxide	$C_6\,H_8\,Br_2\,O$	1.7, 17°	Henry. B. S. C. 20, 452.
Brommethylallyl oxide	$C_4\,H_7\,Br\,O$	1.35, 10°	Henry. B. S. C. 18, 232.
Bromethylallyl oxide	$C_5\,H_9\,Br\,O$	1.27, 12°	Henry. Ber. 5, 186.
Monobromhydrin	$C_3\,H_5.\,Br\,(O\,H)_2$	1.717, 4°	Veley. C. N. 47, 39.
Dibromhydrin	$C_3\,H_5.\,Br_2\,O\,H$	2.11, 10°	Berthelot and De Luca. J. 8, 627.
"	"	2.11, 18°	Berthelot and De Luca. J. 9, 601.
"	"	2.02, 18°.5	Zotta. A. C. P. 174, 87.
Epibromhydlin	$C_3\,H_5\,Br\,O$	1.615, 14°	Berthelot and De Luca. J. 9, 600.
Bromdiethylin	$C_3\,H_5.\,Br\,(O\,C_2\,H_5)_2$	1.258, 8°	Henry. Ber. 4, 701.
Diethyl brommaleate	$C_8\,H_{11}\,Br\,O_4$	1.4095, 17°.5	Anschütz and Aschman. Ber. 12, 2284.
Dibromoleic acid	$C_{18}\,H_{32}\,Br_2\,O_2$	1.272, 7°.5	Lefort. J. 6, 451.
Bromcitropyrotartaric anhydride.	$C_5\,H_3\,Br\,O_3$	1.935, 23°	Bourgoin. J. Ph. C. 26, 234.
Ethyl δ brompyromucate	$C_7\,H_7\,Br\,O_3$	1.528, 0°	Hill and Sanger. A. C. P. 232, 52.
Orthomonobromphenol	$C_6\,H_5\,Br\,O$	1.6606, 30°	Körner. J. 19, 574.
Paramonobromphenol	"	1.840, 15°	Hand. A. C. P. 234, 133.

Name.	Formula.	Sp. Gravity.	Authori
Brommethylphenol	$C_7 H_7 Br O$	1.494, 9°	Henry. Z. 247.
Bromparakresol	"	1.5468, 24°.5	Schall and Ber. 17, 2
Brommethylparakresol	$C_8 H_9 Br O$	1.4182, 24°.5	"
Bromisopropylphenol	$C_9 H_{11} Br O$	1.981, 0°	Silva. B.S.(1870.
"	"	1.957, 12°.5	
Bromallylphenol ether	$C_9 H_9 Br O$	1.4028, 11°	Henry. 1 1878.
Brommethyleugenol	$C_{11} H_{13} Br O_2$	1.3959, 0°	Wassermann 88, 1207.
Benzoyl bromide	$C_7 H_5 O. Br$	1.5700, 15°	Claisen. 2478.
Monobromcamphor	$C_{10} H_{15} Br O$	1.437	Schröder. 1 1070.
"	"	1.449	
Santonyl bromide		1.4646	Carnelutti a sini. Ber. :

LVII. BROMINE COMPOUNDS CONTAINING NITROG

Name.	Formula.	Sp. Gravity.	Authori
Brompicrin	$C Br_3 N O_2$	2.811, 12°.5	Bolas and Z. C. 18, 4
"	"	2.816, 18°	Gladstone. 249.
Tetranitroethylene bromide.	$C_2 (N O_2)_4 Br_2$	1.25, 14°	Villiers. J. (815.
Bromonitric glycol	$C_2 H_4 Br N O_3$	1.735, 8°	Henry. A 27, 243.
Bromallyl nitrate	$C_3 H_4 Br N O_3$	1.5, 13°	Henry. B. S 232.
Nitrobromtoluene. B. 269°	$C_7 H_6 Br N O_2$	1.612, 20°	Wroblevsky 18, 240.
" B. 256°	"	1.631, 18°	Wroblevsky 18, 166.
Bromtoluidine. B. 240°	$C_7 H_8 Br N$	1.510, 20°	Wroblevsky P. 168, 14
" B. 255°-260°	"	1.1442, 19°	Wroblevsky P. 192, 2
Brompyridine	$C_5 H_4 Br N$	1.645, 0°	Ciamician Dennstedt 15, 1174.
"	"	1.646, 0°	Danesi. Ber.
"	"	1.632, 10°	Hofmann. 589.

LVIII. COMPOUNDS CONTAINING C, H, AND I.

1st. Iodides of the Paraffin Series.

Name.	Formula.	Sp. Gravity.	Authority.
iodide	$C H_3 I$	2.237, 22°	Dumas and Peligot. Ann. (2), 58, 80.
"	"	2.19922, 0°	Pierre. C. R. 27, 218.
"	"	2.2636, 20°	Haagen. P. A. 131, 117.
"	"	2.269, 25°	Linnemann. Z. C. 11, 285.
"	"	2.2905, 16°	Sigel. A. C. P. 170, 345.
"	"	2.1905, 42°	Ramsay. J. C. S. 35, 463.
"	"	2.28517, 15°	Perkin. J. P. C. (2), 31, 481.
"	"	2.25288, 25°	
"	"	2.3346, 0°	Dobriner. A. C. P. 243, 23.
"	"	2.2146, 42°.8	
odide	$C_2 H_5 I$	1.9206, 23°.3	Gay Lussac. Ann. (1), 91, 91.
"	"	1.92, 16°	Marchand. J. P. C. 33, 188.
"	"	1.97546, 0°	Pierre. C. R. 27, 218.
"	"	1.9567, 5°–10°	Regnault. P. A. 62, 50.
"	"	1.9457, 10°–15°	
"	"	1.9348, 15°–20°	
"	"	1.9464, 16°	Frankland. J. 2, 412.
"	"	1.9309, 15°	Mendelejeff. J. 13, 7.
"	"	1.98, 4°	Berthelot. A. C. P. 115, 114.
"	"	1.927, 20°	Linnemann. A. C. P. 144, 133.
"	"	1.9265, 19°	Linnemann. A. C. P. 148, 251.
"	"	1.935, 20°	Haagen. P. A. 131, 117.
"	"	1.938, 20°	
"	"	1.979, 0°	Pierre and Puchot. Ann. (4), 22, 261.
"	"	1.907, 30°.4	
"	"	1.9444, 14°.5	Linnemann. A. C. P. 160, 195.
"	"	1.944, 15°	Crismer. Ber. 17, 652.
"	"	1.9318, 14°	Gladstone. Bei. 9, 249.
"	"	1.8111, 72°.2	Schiff. Ber. 19, 560.
"	"	1.96527, 4°	Perkin. J. P. C. (2), 31, 481.
"	"	1.94332, 15°	
"	"	1.92431, 25°	
"	"	1.9795, 0°	Dobriner. A. C. P. 243, 23.
"	"	1.8156, 72°.5	
iodide	$C_3 H_7 I$	1.789, 16°	Berthelot and De Luca. J. 7, 452.
	"	1.7012, 21°	Linnemann. J. 21, 438.

NAME.	FORMULA.	SP. GRAVITY.	AUT
Propyl iodide	C_3H_7I	1.7848, 16°	Chapma J. C.
" "	"	1.782, 0°	Rossi. A 79.
" "	"	1.7472, 16°	Linnem P. 160
" "	"	1.7377, 28°	Linnem P. 161
" "	"	1.7610, 16°	Linnem P. 161
" "	"	1.78685, 0°	Brown. 887.
" "	"	1.75085, 19°.27	
" "	"	1.74772, 20°.79	
" "	"	1.74628, 20°.91	
" "	"	1.7427, 20°	Brühl. 208, 1
" "	"	1.7483, 14°	De Heen
" "	"	1.5867, 102°.5	Zander. 214, 1
" "	"	1.7838, 0°	Chancel. 648.
" "	"	1.7508, 16°	Gladston 249.
" "	"	1.7842, 0°	Pierre a Ann.
" "	"	1.7674, 9°.1	
" "	"	1.6848, 52°.6	
" "	"	1.6378, 75°.8	
" "	"	1.76782, 10°	Perkin. 81, 48
" "	"	1.75858, 15°	
" "	"	1.7829, 0°	Dobrine 248, 2
" "	"	1.585, 102°.5	
Isopropyl iodide	"	1.70, 15°	Linnem 489.
" "	"	1.714, 16°	Erlenme P. 126
" "	"	1.73, 0°	Simpson 129, 1
" "	"	1.725, 0°	Wurtz. 136, 4
" "	"	1.69, 15°	Linnem P., 3d
" "	"	[illegible], 15°	Linnem P., 3d
" "	"	[illegible], 0°	Erlenme P. 18
"	"	[illegible], 17°	
		[illegible], 17°	H.L.B 4th
		[illegible], 35°	
		[illegible]	Linnem P. 14
		[illegible]	Siersch. 140, 1
		[illegible]	Linnem P. 16
		[illegible]	Brown 887.
		[illegible] 19°.8	
		[illegible] 20°.14	
		[illegible] 21°.[illegible]	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
opropyl iodide	C_3H_7I	1.7033, 20°	Brühl. A. C. P. 203, 1.
" "	"	1.5650, 89°	Zander. A. C. P. 214, 181.
" "	"	1.7157, 14°	Gladstone. Bei. 9, 249.
" "	"	1.71630, 15°	Perkin. J. P. C. (2), 31, 481.
" "	"	1.70049, 25°	
utyl iodide	C_4H_9I	1.643, 0°	Lieben and Rossi. A. C. P. 158, 137.
" "	"	1.6136, 20°	
" "	"	1.5894, 40°	
" "	"	1.5804, 18°	Linnemann. Ann. (4), 27, 268.
" "	"	1.6166, 20°	Brühl. A. C. P. 203, 1.
" "	"	1.6172, 14°	De Heen. Bei. 5, 105.
" "	"	1.6476, 0°	Dobriner. A. C. P. 243, 23.
" "	"	1.4308, 129°.9	
Secondary butyl iodide	"	1.632, 0°	De Luynes. J. 17, 499.
" " "	"	1.600, 20°	
" " "	"	1.584, 30°	
" " "	"	1.6263, 0°	Lieben. J. 21, 439.
" " "	"	1.6111, 10°	
" " "	"	1.5952, 20°	
" " "	"	1.5787, 30°	
" " "	"	1.634, 0°	Wurtz. A.C.P. 152, 23.
Isobutyl iodide	"	1.604, 19°	Wurtz. J. 7, 573.
" "	"	1.643, 0°	Wurtz. J. 20, 573.
" "	"	1.6301, 0°	Chapman and Smith. J. C. S. 22, 156.
" "	"	1.6032, 16°	
" "	"	1.54816, 50°	
" "	"	1.6345, 0°	Pierre and Puchot. Ann. (4), 22, 317.
" "	"	1.6214, 8°.3	
" "	"	1.6387, 56°.4	
" "	"	1.464, 98°.8	
" "	"	1.6081, 19°.5	Linnemann. A. C. P. 160, 195.
" "	"	1.592, 22°	Linnemann. Ann. (4), 27, 268.
" "	"	1.6433, 0°	Erlenmeyer and Hell. A. C. P. 160, 257.
" "	"	1.6278, 10°	
" "	"	1.6114, 20°	
" "	"	1.6401, 0°	Brauner. A. C. P. 192, 69.
" "	"	1.6050, 20°	
" "	"	1.6056, 20°	Brühl. A. C. P. 203, 1.
" "	"	1.5982	Gladstone. Bei. 9, 249.
" "	"	1.4335, 114°.5	Schiff. Ber. 19, 560.
" "	"	1.61385, 15°	Perkin. J. P. C. (2), 31, 481.
" "	"	1.60066, 25°	
Trimethylcarbyl iodide. ?	"	1.587, 0°	Two lots. Puchot. Ann. (5), 28, 546.
" "	"	1.501, 50°.1	
" "	"	1.571, 0°	
" "	"	1.479, 53°	
Normal pentyl iodide	$C_5H_{11}I$	1.5435, 0°	Lieben and Rossi. A. C. P. 159, 70.
" " "	"	1.5174, 20°	

NAME.	FORMULA.	SP. GRAVITY.	AUTHOR
Normal pentyl iodide	$C_5H_{11}I$	1.4961, 40°	Lieben and A. C. P.
" " "	"	1.5444, 0°	Dobriner. P. 243,
" " "	"	1.3128, 151°.7	
Amyl iodide	"	1.51118, 11°.5	Frankland.
" "	"	1.5277, 0°	Frankland.
" "	"	1.4936, 20°	Grimm. J.
" "	"	1.4676, 0°	Kopp. A. C 307.
" "	"	1.4387, 22°.3	
" "	"	1.5087, 15°.8	Mendelejeff.
" "	"	1.4734, 20°	Haagen. P. 117.
" "	"	1.5005, 14°	De Heen. 105.
" "	"	1.5413, 0°	Flawitzky. 11.
" "	"	1.5084, 23°	
" "	"	1.5048, 14°	Gladstone. 249.
" "	"	1.3098, 148°	Schiff. Ber.
" "	"	1.5100, 15°	Perkin. J. 31, 481.
" "	"	1.49811, 25°	
" " Active	"	1.54, 15°	Le Bel. B. 545.
" " "	"	1.5425, 16°	Just. A. C 150.
Methylpropylcarbyl iodide	"	1.537, 0°	Wurtz. J.
" "	"	1.5219, 11°	
" "	"	1.539, 0°	Wagner a eff. A. C 318.
" "	"	1.510, 20°	
" "	"	1.499, 15°	Romburgh. 392.
Diethylcarbyl iodide	"	1.528, 0°	Wagner a eff. A. C 365.
" "	"	1.505, 16°	
" "	"	1.4792	Gladstone. 249.
" "	"	1.528, 0°	Wagner a eff. A. C 318.
" "	"	1.501, 20°	
Dimethylethylcarbyl iodide.	"	1.5207, 0°	Flawitzky. 179, 348.
" "	"	1.4954, 19°	
" "	"	1.524, 0°	Wischnegr C. P. 19
" "	"	1.497, 19°	
" "	"	1.522, 0°	Winogrado P. 191, 1
" "	"	1.498, 18°	
Hexyl iodide	$C_6H_{13}I$	1.431, 19°	Pelouze hours. J
" "	"	1.4115	Franchimo Zincke. 263.
" "	"	1.4607, 0°	Lieben and J. R. C.
" "	"	1.4363, 20°	
" "	"	1.4178, 40°	
" "	"	1.4661, 0°	Dobriner 243, 2
" "	"	1.2165, 177°.1	
Secondary hexyl iodide	"	1.439	Wanklyn meyer.

Name.	Formula.	Sp. Gravity.	Authority.
ary hexyl iodide	$C_6H_{13}I$	1.4447, 0°	Wanklyn and Erlenmeyer. J. 16, 518.
" "	"	1.3812, 50°	
" "	"	1.4526, 0°	Hecht. A. C. P. 165, 146.
" "	"	1.4589, 0°	Krusemann. Ber. 9, 1468.
" "	"	1.3938, 50°	
" "	"	1.4477, 0°	
" "	"	1.3808, 50°	
" "	"	1.4487, 0°	
" "	"	1.3839, 50°	
" "	"	1.4193	Gladstone. Bei. 9, 249.
" "	"	1.42694, 15°	Perkin. J. P. C. (2), 31, 481.
" "	"	1.41631, 25°	
ylisopropylcarbyl	"	1.3939, 0°	Pawlow. A. C. P. 196, 122.
e. "	"	1.3725, 19°	
lic iodide	"	1.4789, 0°	Friedel and Silva. J. C. S. (2), 11, 488.
l heptyl iodide	$C_7H_{15}I$	1.346, 16°	Cross. J. C. S. 32, 128.
" "	"	1.4008, 0°	Dobriner. A. C. P. 243, 23.
" "	"	1.1344, 203°.8	
ylcarbyl iodide	"	1.20, 20°	Kurtz. A. C. P. 161, 205.
l octyl iodide	$C_8H_{17}I$	1.338, 16°	Zincke. J. 22, 371.
" "	"	1.355, 0°	Krafft. Ber. 19, 2218.
" "	"	1.337, 16°	
" "	"	1.34069, 15°	Perkin. J. P. C. (2), 31, 481.
" "	"	1.33163, 25°	
" "	"	1.3533, 0°	Dobriner. A. C. P. 243, 23.
" "	"	1.075, 225°.5	
hexylcarbyl iodide	"	1.310, 16°	Bouis. J. 8, 526.
" "	"	1.330, 0°	De Clermont. J. 21, 449.
" "	"	1.314, 21°	
l nonyl iodide	$C_9H_{19}I$	1.3052, 0°	Krafft. Ber. 19, 2218.
" "	"	1.2874, 16°	
decyl iodide	$C_{10}H_{21}I$	1.2768, 0°	" "
" "	"	1.2599, 16°	

2d. Miscellaneous Compounds.

NAME.	FORMULA.	SP. GRAVITY.	AUTHO[RITY]
Methylene iodide	$C H_2 I_2$	3.342, 5°	Butlerow.
" "	"	3.3188, 19°	Gladstone. 249.
" "	"	3.326, 15°.5	
" "	"	3.328, 15°	
" "	"	3.2843, 16°	Brauns. Be
" "	"	3.289, 33°	
" "	"	3.189, 74°	
" "	"	3.28528, 15°	Perkin. J. 31, 481.
" "	"	3.26555, 25°	
Ethylene iodide	$C_2 H_4 I_2$	2.07	E. Kopp. 33, 183.
Ethylidene iodide	"	2.84, 0°	Gustavson. 22, 13.
Propylene iodide	$C_3 H_6 I_2$	2.490, 13°.5	Berthelot Luca.
" "	"	2.5631, 19°	Freund. 42, 156.
Trimethylene iodide	"	2.59617, 4°	Perkin. Be
" "	"	2.57612, 15°	
" "	"	2.56144, 25°	
Allylene dihydriodate	"	2.15, 0°	Oppenheim 498.
" "	"	2.4458, 0°	Semenoff.
β Butylene iodide	$C_4 H_8 I_2$	2.291, 0°	Wurtz. C 478.
Diallyl dihydriodate	$C_6 H_{12} I_2$	2.024, 0°	Wurtz. J
Iodoform	$C H I_3$	2.00	Weltzien's menstell
"	"	4.09	Brügelman 17, 2359.
Acetylene iodide	$C_2 H_2 I_2$	3.303, 21°, s.	Sabanejeff. 178, 119-
" "	"	2.942, 21°, l.	
Iodethylene (vinyl iodide)	$C_2 H_3 I$	1.98	Regnault.
"	"	2.09, 0°	Gustavson. 781.
Allyl iodide	$C_3 H_5 I$	1.789, 16°	Berthelot Luca.
" "	"	1.746, 0°	Woieikoff. 495.
" "	"	1.848, 12°	Linnemann P., 3d S
" "	"	1.839, 14°	Linnemann P., 3d S
" "	"	1.8696, 0°	Zander. 214, 18
" "	"	1.6601, 102°.6	
" "	"	1.846, 15°	Romburgh 392.
" "	"	1.82403, 15°	Perkin. J. 31, 481.
" "	"	1.80776, 25°	
Allylene hydriodate	"	1.8346, 0°	Semenoff.
" "	"	1.8028, 16°	
Allylene iodide	$C_3 H_4 I_2$	2.62, 0°	Oppenheim 498.

Name.	Formula.	Sp. Gravity.	Authority.
Iodallylene	$C_3 H_3 I$	1.7	Liebermann. J. 18, 495.
Propargyl iodide	"	2.0177, 0°	Henry. Ber. 17, 1182.
Diallyl hydriodate	$C_6 H_{11} I$	1.497, 0°	Wurtz. J. 17, 514.
Iodhexylene	"	1.92, 10°	Destrem. Ann. (5), 27, 50.
Iodobenzene	$C_6 H_5 I$	1.69	Schutzenberger. J. 14, 348.
"	"	1.833	Kekulé. J. 19, 554.
"	"	1.64, 15°	Ladenburg. A. C. P. 159, 251.
"	"	1.8403, 11°	Schiff. Ber. 19, 560.
"	"	1.7732, 56°.8	
"	"	1.7374, 79°.2	
"	"	1.6486, 135°.5	
"	"	1.8578, 0°	Schiff. Bei. 9, 559.
"	"	1.5612, 187°.5	
Orthoiodtoluene	$C_7 H_7 I$	1.698, 20°	Beilstein and Kuhlberg. A.C.P. 158, 349.
Metaiodtoluene	"	1.697, 20°	Beilstein and Kuhlberg. Z. C. 13, 103.
Benzyl iodide	"	1.7335, 25°	Lieben. J. 22, 425.

LIX. COMPOUNDS CONTAINING C, H, I, O, OR C, H, I, N.

Name.	Formula.	Sp. Gravity.	Authority.
Tetraiodmethyl oxide	$C_2 H_2 I_4 O$	3.345	Brüning. J. 10, 432.
Moniodethyl oxide	$C_4 H_9 I O$	1.6924, 0°	Henry. C. R. 100, 1007.
Acetyl iodide	$C_2 H_3 O. I$	1.98, 17°	Guthrie. J. 10, 344.
Propyl iodacetate	$C_5 H_9 I O_2$	1.6794, 7°	Henry. C. R. 100, 114.
Methyl β iodpropionate	$C_4 H_7 I O_2$	1.8408, 7°	" "
Ethyl β iodpropionate	$C_5 H_9 I O_2$	1.707, 8°	" "
" "	"	1.6789, 15°	Otto. Ber. 21, 98.
Methyl γ iodbutyrate	"	1.666, 5°	Henry. C. R. 102, 368.
Iodaldehyde	$C_2 H_3 I O$	2.14, 20°	Chautard. C. R. 102, 118.
Iodacetone	$C_3 H_5 I O$	2.17, 15°	Clermont and Chautard. C.R. 100, 745.
Iodhydrodiglycide	$C_6 H_{11} I O_3$	1.783	Berthelot and De Luca.
Diiodhydrin	$C_3 H_6 I_2 O$	2.4	Nahmacher. Ber. 5, 356.
Epiiodhydrin	$C_3 H_5 I O$	2.03, 13°	Reboul. J. 13, 459.
Santonyl iodide		1.3282	Carnelutti and Nasini. Ber. 13, 2210.
Iodchinolin	$C_9 H_6 I N$	1.9323	La Coste. Ber. 18, 780.
"	"	1.9345	

2d. Miscellaneous Compounds.

Name.	Formula.	Sp. Gravity.	Autho
Methylene iodide	$C H_2 I_2$	3.342, 5°	Butlerow.
" "	"	3.3188, 19°	
" "	"	3.326, 15°.5	Gladstone. 249.
" "	"	3.328, 15°	
" "	"	3.2348, 16°	
" "	"	3.289, 38°	Brauns. B
" "	"	3.189, 74°	
" "	"	3.28528, 15°	Perkin. J.
" "	"	3.26555, 25°	31, 481.
Ethylene iodide	$C_2 H_4 I_2$	2.07	H. Kopp. 33, 183.
Ethylidene iodide	"	2.84, 0°	Gustavson. 22, 12.
Propylene iodide	$C_3 H_6 I_2$	2.490, 18°.5	Berthelot Luca. J
" "	"	2.5631, 19°	Freund. J 42, 156.
Trimethylene iodide	"	2.59617, 4°	
" "	"	2.57612, 15°	Perkin. Be
" "	"	2.56144, 25°	
Allylene dihydriodate	"	2.15, 0°	Oppenheim 498.
" "	"	2.4458, 0°	Semenoff. J
β Butylene iodide	$C_4 H_8 I_2$	2.291, 0°	Wurtz. C. 472.
Diallyl dihydriodate	$C_6 H_{12} I_2$	2.024, 0°	Wurtz. J.
Iodoform	$C H I_3$	2.00	Weltzien's menstellu
"	"	4.09	Brügelmann 17, 2359.
Acetylene iodide	$C_2 H_2 I_2$	3.303, 21°, s.	Sabanejeff.
" "	"	2.942, 21°, l.	178, 119-
Iodethylene (vinyl iodide)	$C_2 H_3 I$	1.98	Regnault.
"	"	2.09, 0°	Gustavson. 731.
Allyl iodide	$C_3 H_5 I$	1.789, 16°	Berthelot Luca.
" "	"	1.746, 0°	Woieikoff. 495.
" "	"	1.848, 12°	Linnemann P., 3d Su
" "	"	1.839, 14°	Linnemann P., 3d Su
" "	"	1.8696, 0°	Zander.
" "	"	1.6601, 102°.6	214, 181
" "	"	1.846, 15°	Romburgh. 392.
" "	"	1.82403, 15°	Perkin. J.
" "	"	1.80776, 25°	31, 481.
Allylene hydriodate	"	1.8346, 0°	Semenoff. J
" "	"	1.8028, 16°	
Allylene iodide	$C_3 H_4 I_2$	2.62, 0°	O

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
iene	$C_2 H_3 I$	1.7	Liebermann. J. 18, 495.
yl iodide	"	2.0177, 0°	Henry. Ber. 17, 1182.
hydriodate	$C_6 H_{11} I$	1.497, 0°	Wurtz. J. 17, 514.
ylene	"	1.92, 10°	Destrem. Ann. (5), 27, 50.
zene	$C_6 H_5 I$	1.69	Schutzenberger. J. 14, 848.
	"	1.833	Kekulé. J. 19, 554.
	"	1.64, 15°	Ladenburg. A. C. P. 159, 251.
	"	1.8403, 11°	Schiff. Ber. 19, 560.
	"	1.7782, 56°.8	Schiff. Ber. 19, 560.
	"	1.7874, 79°.2	Schiff. Ber. 19, 560.
	"	1.6486, 185°.5	Schiff. Ber. 19, 560.
	"	1.8578, 0°	Schiff. Bei. 9, 559.
	"	1.5612, 187°.5	Schiff. Bei. 9, 559.
ltoluene	$C_7 H_7 I$	1.698, 20°	Beilstein and Kuhlberg. A.C.P. 158, 349.
toluene	"	1.697, 20°	Beilstein and Kuhlberg. Z. C. 13, 103.
iodide	"	1.7835, 25°	Lieben. J. 22, 425.

. COMPOUNDS CONTAINING C, H, I, O, OR C, H, I, N.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
imethyl oxide	$C_2 H_2 I_4 O$	3.345	Brüning. J. 10, 482.
ethyl oxide	$C_4 H_9 I O$	1.6924, 0°	Henry. C. R. 100, 1007.
iodide	$C_2 H_3 O. I$	1.98, 17°	Guthrie. J. 10, 344.
iodacetate	$C_5 H_9 I O_2$	1.6794, 7°	Henry. C. R. 100, 114.
β iodpropionate	$C_4 H_7 I O_2$	1.8408, 7°	" "
iodpropionate	$C_5 H_9 I O_2$	1.707, 8°	" "
"	"	1.6789, 15°	Otto. Ber. 21, 98.
γ iodbutyrate	"	1.666, 5°	Henry. C. R. 102, 368.
hyde	$C_2 H_3 I O$	2.14, 20°	Chautard. C. R. 102, 118.
ne	$C_3 H_5 I O$	2.17, 15°	Clermont and Chautard. C.R. 100, 745.
odiglycide	$C_6 H_{11} I O_3$	1.783	Berthelot and De Luca.
drin	$C_3 H_5 I_2 O$	2.4	Nahmacher. Ber. 5, 356.
drin	$C_3 H_5 I O$	2.03, 18°	Reboul. J. 13, 459.
iodide		1.8282	Carnelutti and Nasini. Ber. 13, 2210.
[illegible]	$C_9 H_8 I N$	1.9323	La Coste. Ber. 18, 780.
	"	1.9345	La Coste. Ber. 18, 780.

LX. COMPOUNDS CONTAINING TWO OR MORE HAL

NAME.	FORMULA.	SP. GRAVITY.	AUTH
Chlorobrommethane	$CH_2 Cl Br$	1.9907, 19°	Henry. (569.
Bromochloroform	$CH Cl_2 Br$	1.9254, 15°	Jacobsen a meister. 599.
"	"	1.983	Arnhold. 240, 122
Chlorobromoform	$CH Cl Br_2$	2.4450, 15°	Jacobsen a meister. 599.
"	"	2.447, 20°	Dyson. J. 36.
Ethylene chlorobromide	$CH_2 Cl. CH_2 Br$	1.700, 18°	Henry. A. 15.
" "	"	1.705, 11°	Montgol Giraud. 654.
Ethylidene chlorobromide	$CH_3. CH Cl Br$	1.61, 14°	Reboul. 155, 215
" "	"	1.666, 16°	Denzel. 1739.
Chlorodibromethane	$CH_3. C Br_2 Cl$	2.184, 16°	"
"	$CH_2 Br. CH Br Cl$	2.268, 16°	"
Dichlorbromethane	$CH_3. C Br Cl_2$	1.752, 16°	Denzel. 1740.
"	$CH_2 Cl. CH Br Cl$	2.118, 0°	Lescoeur. 34, 718.
"	"	1.86850, 15°	Perkin. J. 32, 523.
"	"	1.85420, 25°	
"	$CH Cl_2. CH_2 Br$	1.238, 15°. ?	Delacre. B Belg. (3
Brommethylchloroform	$C Cl_3. CH_2 Br$	1.8839, 0°	Henry. C.
Chlortribromethane	$CH_2 Br. C Br_2 Cl$	2.602, 16°	Denzel. 1739.
Dichlordibromethane	$CH_2 Br. C Br Cl_2$	2.270, 16°	Denzel. 1740.
"	$CH Cl_2. CH Br_2$	2.391, 19°	Sabanejeff. 1221.
Trichlordibromethane	$C_2 H Cl_3 Br_2$	2.317, 0°	Paterno. (2), 5, 2
"	"	2.295, 19°.5	
"	"	2.129, 100°	
Chlortetrabromethane	$CH Br_2. C Br_2 Cl$	3.366, 16°	Denzel. 1740.
Chlordibromethylene	$C_2 H Br_2 Cl$	2.275, 16°	Denzel. 1741.
Dichlorbromethylene	$C_2 H Cl_2 Br$	1.906, 16°	"
Acetylene chlorobromide	$C_2 H_2 Cl Br$	1.8157, 0°	Plimpton. 41, 391.
" "	"	1.7787, 0°	Sabanejeff. 1221.
" "	"	1.7457, 19°	
Propylene chlorobromide	$C_3 H_6 Cl Br$	1.52, 16°	Reboul. 155, 2
" "	$CH_3. CH Cl. CH_2 Br$	1.585, 0°	Frie 8
" "	"	1.475, 18°	

AME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
hlorobromide	$CH_3.CH_2.CHClBr$	1.60, 20°	Reboul. Ber. 7, 1037.
"	$CH_3.CHBr.CH_2Cl$	1.474, 21°	" "
"	$CH_2Br.CH_2.CH_2Cl$	1.63, 8°	" "
rpropylene	$CH_3.CClBr.CH_2Br$	2.064, 0°	Friedel. J. 12, 337.
mhydrin	$C_3H_5ClBr_2$	2.085, 9°	Reboul. J. 13, 461.
	"	2.088	Oppenheim. J. 21, 341.
	"	2.004, 15°	Darmstaedter. J. 22, 375.
hydroglycide	C_3H_4ClBr	1.69, 14°	Reboul. J. 13, 461.
of chlorobromide.	$C_3H_4ClBr_3$	2.89, 14°	Reboul. J. 13, 462.
of epidichlor-	$C_3H_4Cl_2Br_2$	2.10, 18°	" "
hloride	C_3H_4BrCl	1.63, 11°	Henry. B. S. C. 18, 232.
bromide	$C_2H_2ClO.Br$	1.913, 9°	Wilde. J. 17, 320.
chloride	$C_2H_2BrO.Cl$	1.908, 9°	Wilde. J. 17, 319.
tyl bromide	$C_2Cl_3O.Br$	1.900, 15°	Hofferichter. J. P. C. (2), 20, 195.
rabromethyl	$C_4Cl_6Br_4O$	2.5, 18°	Malaguti. Ann. (3), 16, 25.
ethyl acetate	$C_4H_6ClBrO_2$	1.6499, 11°.4	Henry. C. R. 97, 1308.
omethyl acet-	$C_6H_8Cl_2Br_2O_2$	1.956, 19°	Conrad and Guthzeit. Ber. 16, 1551.
oracetone	$C_3H_3ClBr_2O$	2.270	Cloëz. Ann. (6), 9, 145.
al	C_2HCl_2BrO	1.9176, 15°	Jacobsen and Neumeister. Ber. 15, 599.
al	C_2HBr_2ClO	2.2793, 15°	" "
hydrin	C_3H_6ClBrO	1.740, 12°	Reboul. J. 13, 458.
	"	1.7641, 9°	Henry. Z. C. 13, 604.
omodichlorhy-	$C_3H_5Cl_2BrO$	2.1719, 0°	Wolff. A. C. P. 150, 32.
"	"	2.1426, 17°.5	
omnitrome-	$CClBr_2NO_2$	2.421, 15°	Tscherniak. Ber. 8, 610.
nitrin	$C_3H_5ClBrNO_3$	1.7904, 9°	Henry. Ber. 4, 701.
ethane	CH_2ClI	2.49, 20°	Sakurai. J. C. S. 41, 362.
	"	2.447, 11°	Sakurai. J. C. S. 47, 198.
	"	2.444, 14°.5	
rm	$CHCl_2I$	1.96	Bouchardat. A. C. P. 22, 230.
	"	2.454, 0°	Borodine. J. 15, 391.
	"	2.403, 21°.5	
loriodide	C_2H_4ClI	2.151, 0°	Simpson. J. 16, 485.
"	"	2.39, 20°	Maumené. J. 22, 345.
	"	2.16439, 0°	Thorpe. J. C. S. 37, 371.
	"	1.87915, 140°.1	

Name.	Formula.	Sp. Gravity.	Aut
Chloriodethylene	$C_2 H_2 Cl I$	2.1431, 0°	Henry. C
Acetylene chloriodide	"	2.2298	Plimpto 41, 391
" "	"	2.154, 0° }	Sabaneje 1221.
" "	"	2.1175, 19° }	
Propylene chloriodide	$C_3 H_6 Cl I$	1.932, 0°	Simpson.
" "	"	1.824	Oppenhe 571.
β Chlorallyl iodide	$C_3 H_4 Cl I$	1.977, 15° }	Romburg 393.
α Chlorallyl iodide	"	1.880 } 15° }	
" "	"	1.913 }	
Dichloriodhydrin	$C_3 H_5 Cl_2 I$	2.0476, 9°	Henry.
Orthochloriodobenzene	$C_6 H_4 Cl I$	1.928, 24°.5	Beilstein batow. 176, 4
Chloriodotoluene	$C_7 H_6 Cl I$	1.702, 19°	Beilstein berg. 156, 82
"	"	1.716, 17°	Wroblew 13, 164
"	"	1.770, 19°.5	"
Chloriodethyl acetate	$C_4 H_6 Cl I O_2$	1.9540, 18°	Henry. 1308.
Iodochlorhydrin	$C_3 H_6 Cl I O_2$	2.06, 10°	Reboul.
Bromiodomethane	$C H_2 Br I$	2.9262, 16°.8	Henry. 599.
Ethylene bromiodide	$C H_2 Br. C H_2 I$	2.7, 1°	Reboul. 155, 21
" "	"	2.516, 29°	Simpson. 53.
" "	"	2.514, 30°	Friedel. 164.
" "	"	2.705, 18°, s.	Lagerma 7, 907.
Ethylidene bromiodide	$C H_3. C H Br I$	2.5, 1°	Reboul. 155, 21
" "	"	2.452, 16°	Lagerma 7, 907.
Dibromiodethane	$C_2 H_3 Br_2 I$	2.86, 29°	Simpson. 53.
Bromiodethylene	$C_2 H_2 Br I$	2.5651, 0°	Henry. 742.
Acetylene bromiodide	"	2.750, 0°, s. }	Plimpton 41, 391.
" "	"	2.6272, 17°.5 }	
Propylene bromiodide	$C_3 H_6 Br I$	2.2, 11°	Reboul. 155, 21
Paraiodorthobromtoluene	$C_7 H_6 Br I$	2.044, 20°.7	Wroblew 13, 165
Metaiodorthobromtoluene	"	2.139, 18°	Wroblew 14, 210
Chlorobromiodethane	$C_2 H_3 Cl Br I$	2.53, 0°	Henry. 680.
Chlorobromiodhydrin	$C_3 H_5 Cl Br I$	2.325, 9°	Henry.

LXI. ORGANIC COMPOUNDS OF FLUORINE.*

'AME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
›e	$C_6 H_5 F$	1.024, 20°	Wallach. A. C. P. 235, 255.
	"	1.0236, 20°	Wallach and Heusler. A. C. P. 243, 221.
›enzene	$C_6 H_4 F_2$	1.11	Wallach and Heusler. A. C. P. 243, 219.
uene	$C_7 H_7 F$	.992, 25°	Wallach. A. C. P. 235, 255.
lorobenzene	$C_6 H_4 Cl F$	1.226, 15°	Wallach and Heusler. A. C. P. 243, 219.
›mbenzene	$C_6 H_4 Br F$	1.593, 15°	" "
ilin	$C_6 H_6 N F$	1.153, 25°	Wallach. A. C. P. 235, 255.
trobenzene	$C_6 H_4 N O_2 F$	1.326, 1.	" "

LXII. ORGANIC COMPOUNDS OF SULPHUR.

1st. Compounds Containing C, H, and S.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
lphide	$(C H_3)_2 S$	.845, 21°	Regnault. Ann. (2), 71, 391.
›hide	$(C_2 H_5)_2 S$	.825, 20°	Regnault. Ann. (2), 71, 388.
"	"	.83672, 0°	Pierre. C. R. 27, 218.
"	"	.83676, 20	Nasini. Ber. 15, 2882.
phide	$(C_3 H_7)_2 S$	.814, 17°	Cahours. B. S. C. 19, 301.
l sulphide	$(C_2 H_5) (C_5 H_{11}) S$	.852, 0°	Saytzeff. J. 19, 529.
hide	$(C_4 H_9)_2 S$	.849, 0°	Saytzeff. J. 19, 528.
'	"	.8386, 16°	Grabowsky and Saytzeff. A. C. P. 175, 351.
'	"	.8317, 23°	Beymann. J. C. S. (2), 13, 141.
lphide	"	.8368, 10°	Beckman. J. P. C. (2), 17, 446.
phide	$(C_5 H_{11})_2 S$	.84314, 20°	Nasini. Ber. 15, 2883.
[illegible]	$(C_8 H_{17})_2 S$	.8419, 17°	Mölinger. Ber. 9, 1004.

*[illegible]ganic compounds of boron.

Name.	Formula.	Sp. Gravity.	Auth
Methyl disulphide	$C_2H_6S_2$	1.046, 18°	Cahours. 18, 258.
" "	"	1.06358, 0°	Pierre. C.
Ethyl disulphide	$C_4H_{10}S_2$	About 1.00	Morin. P.
" "	"	.99267, 20°	Nasini.] 2882.
Amyl disulphide	$C_{10}H_{22}S_2$	.918, 18°	O. Henry.
Methyl trisulphide	$C_2H_6S_3$	1.2162, 0°	Klason. 3415.
" "	"	1.2059, 10°	
" "	"	1.199, 17°	
Ethyl mercaptan	$C_2H_5.SH$	.842, 15°	Zeise. P..
" "	"	.835, 21°	Liebig. A 15.
" "	"	.8456, 5°—10°	Regnault 60.
" "	"	.8406, 10°—15°	
" "	"	.8356, 15°—20°	
" "	"	.83907, 20°	Nasini. 2882.
Butyl mercaptan	$C_4H_9.SH$	.858, 0°	Grabow Saytze P. 175,
" "	"	.843, 16°	
Isobutyl mercaptan	"	.848, 11°.5	Humann.
" "	"	.8299, 17°	Reymann. (2), 18,
" "	"	.83573, 20°	Nasini. 2882.
Amyl mercaptan	$C_5H_{11}.SH$	.835, 21°	Krutzsch. 31, 2.
" "	"	.8548, 0°	Kopp. A. 307.
" "	"	.8405, 16°.9	
" "	"	.83475, 20°	Nasini. 2883.
Hexyl mercaptan	$C_6H_{13}.SH$	.8856, 0°	Wanklyn meyer.
Carbon tetramercaptide	$C(SC_2H_5)_4$	1.01	Claesson. 520.
Ethylene mercaptan	$C_2H_4(SH)_2$	1.123, 23°.5	Werner.
Methylene dithioethylate	$CH_2.(SC_2H_5)_2$	.987, 20°	Claesson. 123, 176.
Ethylene dithioethylate	$C_2H_4.(SC_2H_5)_2$	.98705, 15°.5	V. Meyer. 3266.
Ethylene thiovinylethylate	$C_2H_4.SC_2H_5.SC_2H_3$	1.01921, 15°.5	"
" "	"	1.0167, 19°-20°	
Derivative of dithioglycol	$C_5H_{10}S_2$	1.037, 22°	Mansfeld. 2662.
Amylene sulphide	$C_5H_{10}S$	.907, 13°	Guthrie.
Vinyl sulphide	$(C_2H_3)_2S$	1.015, 13°	Semmler. 241, 93.
Allyl sulphide	$(C_3H_5)_2S$	.8544, 11°	Gladstone 249.
" "	"	.88765, 4°	Nasini a Bei. 10,
... trisulphide	$C_6H_{10}S_3$	1.012, 15°	Löwig.
... lphide	C_5H_9S	.880, 18°	Guthrie.

[A]ME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
drin	$C_3 H_6 S_3$	1.391, 14°.4	Carius. J. 15, 455.
ulphocarbonate	$C_3 H_6 S_3$	1.159, 18°	Cahours. Ann. (3), 19, 162.
lphocarbonate	$C_5 H_{10} S_3$	1.152	Salomon. J. P. C. (2), 6, 433.
lphocarbonate	$C_{11} H_{22} S_3$	.877	Hüsemann. J. 15, 410.
isulphocarbon-	$C_3 H_4 S_3$	1.4768	Hüsemann. A. C. P. 123, 87
trisulphocar-	$C_4 H_8 S_3$	1.31, 20°	Hüsemann. J. 15, 484.
isulphocarbon-	$C_5 H_8 S_3$	1.26, 20°	" "
isulphocarbon-	$C_8 H_{10} S_3$	1.078	" "
lphocarbonate	$C_7 H_{10} S_3$	.948	Hüsemann. J. 15, 410.
lphide	$(C_6 H_5)_2 S$	1.119	Stenhouse. J. 18, 532.
rasulphide	$(C_6 H_5)_2 S_4$	1.297, 14°.5	Otto. J. P. C. (2), 37, 209.
yl sulphide	$(C_6 H_5) (C_2 H_5) S$	1.0315, 10°	Beckmann. J. C. S. 36, 37.
tolyl sulphide	$(C_7 H_7) (C_2 H_5) S$	1.0016, 17°.5	Gäbler. Ber. 18, 1277.
ercaptan	$C_6 H_5 . S H$	1.078, 14°	Vogt. J. 14, 630.
ercaptan	$C_7 H_7 . S H$	1.058, 20°	Märcker. J. 18, 543.
rcaptan	$C_8 H_9 . S H$	1.036, 18°	Schepper. J. 18, 558.
e mercaptan	$C_9 H_{11} . S H$	1.0192	Holtmeyer. J. 20, 708.
ercaptan	$C_{10} H_{13} . S H$	.9975, 17°.5	Flesch. C. C. 4, 519.
"	"	.989	Fittica. A. C. P. 172, 326.
"	"	.995	Bechler. Leipzig Inaug. Diss. 1873.
myl mercaptan	$C_{11} H_{15} . S H$	.986	" "
mercaptan	$C_{10} H_7 . S H$	1.146, 23°	Schertel. J. 17, 538.
e	$C_4 H_4 S$	1.062, 23°	V. Meyer. Ber. 16, 1471.
	"	1.08844, 0°	Schiff. Ber. 18, 1605.
	"	1.0769, 10°	"
	"	1.0651, 20°	"
	"	1.0533, 30°	"
	"	1.0418, 40°	"
	"	1.0291, 50°	"
	"	1.0169, 60°	"
	"	1.0045, 70°	"
	"	.9920, 80°	"
	"	.98741, 84°	"
	"	1.05928, 4°	Nasini and Scala. Bei. 10, 696.

Name.	Formula.	Sp. Gravity.	Auth
Thiophene	$C_4 H_4 S$	1.07887, 11°.8	Knops. 1887,
"	"	1.06885, 16°.5	
"	"	1.06466, 19°.7	
"	"	1.06482, 20°	
"	"	1.06045, 23°.4	
"	"	1.05662, 26°.6	
"	"	1.05332, 29°.2	
"	"	1.0584, 32°	
Thiotolene	$C_5 H_6 S$	1.0194, 18°	Meyer a Ber. 17
Orthothioxene	$C_6 H_8 S$	.9777, 21°	Demuth. 1858.
"	"	.9938, 21°	Grünewal 2586.
Metathioxene	"	.9755, 17°.5	Messinge 1637.
"	"	.9956, 20°	Zelinsky. 2017.
Ethylthiophene	"	.990, 24°	Meyer a Ber. 17,
Normal propylthiophene	$C_7 H_{10} S$	.974, 16°	"
Isopropylthiophene	"	.9695, 16°	Schleiche 673.
Normal butylthiophene	$C_8 H_{12} S$	.957, 19°	Meyer a Ber. 17,
Diethylthiophene	"	.962, 14°	Muhlert. 684.
Octylthiophene	$C_{12} H_{20} S$	.8118, 20°.5	Schweinit 644.
β Methylpenthiophene	$C_6 H_8 S$	.9938, 19°	Krekeler. 3271.

2d. Compounds Containing C, H, S, and O.

Name.	Formula.	Sp. Gravity.	Auth
Methyl sulphite	$(C H_3)_2 S O_3$	1.0456, 16°.2	Carius.
Methyl ethyl sulphite	$(C H_3) (C_2 H_5) S O_3$	1.0675, 18°	Carius. 111, 10
Ethyl sulphite	$(C_2 H_5)_2 S O_3$	1.085, 16°	Ebelmen quet. 17, 67.
" "	"	1.10634, 0°	Pierre. C.
" "	"	1.1063, 0°	Carius. J 2, 285.
" "	"	1.0926, 12°.7	
" "	"	1.0982, 11°	Nasini.
Methyl sulphate	$(C H_3)_2 S O_4$	1.324, 22°	Dumas a Ann. (
" "	"	1.385, 18°	Bödeker,
" "	"	1.327, 18°	Claesson. [illegible]
" "	"	1.33344, 15°	
" "	"	1.32757, 20°	
" "	"	[illegible]	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
ulphate	$(C_2H_5)_2SO_4$	1.120	Wetherill. J. 1, 692.
"	"	1.1837, 19°	Claesson. J. P. C. (2), 19, 258.
"	"	1.167	Stempnevsky. Ber. 15, 947.
ulphurous acid	$C_2H_5.H.SO_3$	1.3	Kopp. A. C. P. 35, 343.
ulphuric acid	$C_2H_5.H.SO_4$	1.319	Vogel. Gmelin's Handbuch.
" "	"	1.315 } 16°	Marchand. Gmelin's Handbuch.
		1.317 } 16°	
" "	"	1.215	Duflos. Gmelin's Handbuch.
thylsulphonate	$C_4H_{10}SO_3$	1.1712, 0°	Carius. J. P. C. (2), 2, 269.
"	"	1.1508, 20°.4	
"	"	1.14517, 22°	Nasini. Ber. 15, 2884.
l ethyl sulphone	$C_7H_{16}SO_2$	1.0315, 18°	Beckmann. J. C. S. 36, 38.
tyl sulphone	$C_8H_{18}SO_2$	1.0056, 18°	" "
methylxanthate	$CH_3O.CS.CH_3S$	1.143, 15°	Cahours. Ann. (3), 19, 160.
"	"	1.176, 18°	Salomon. J. P. C. (2), 8, 114.
methylxanthate	$CH_3O.CS.C_2H_5S$	1.12, 18°	" "
"	"	1.123, 11°	Chancel. J. 3, 470.
l ethylxanthate	$C_2H_5O.CS.CH_3S$	1.129, 18°	Salomon. J. P. C. (2), 8, 114.
"	"	1.11892, 4°	Nasini and Scala. Bei. 10, 696.
ethylxanthate	$C_2H_5O.CS.C_2H_5S$	1.0703, 18°	Zeise. A. C. P. 55, 310.
"	"	1.07	Debus. A. C. P. 75, 125.
"	"	1.085, 19°	Salomon. J. P. C. (2), 6, 433.
l propylxanthate	$C_3H_7O.CS.CH_3S$	1.08409, 4°	Nasini and Scala. Bei. 10, 696.
propylxanthate	$C_3H_7O.CS.C_2H_5S$	1.05054, 4°	" "
butylxanthate	$C_4H_9O.CS.C_2H_5S$	1.003, 17°	Mylius. B. S. C. 19, 221.
butylxanthate	$C_4H_9O.CS.C_4H_9S$	1.009, 12°	" "
dithioxycarbonate	$C_2H_5S.CO.C_2H_5S$	1.084, 20°	Schmidt and Glutz. J. 21, 575.
"	"	1.085, 19°	Salomon. J. P. C. (2), 6, 433.
thioxycarbonate	$C_2H_5O.CO.C_2H_5S$	1.0285, 18°	" "
ioxythiocarbonate	$C_2H_5O.CS.C_2H_5O$	1.032, 1°	Debus. J. 3, 465.
"	"	1.031, 19°	Salomon. J. P. C. (2), 6, 433.
utyl thioxycarbon-	$C_2H_5S.CO.C_4H_9O$	.9939, 10°	Mylius. Ber. 6, 312.
" "	$C_2H_5O.CO.C_4H_9S$	.9938, 10°	" "
axysulphocarbon-	$C_6H_{10}S_4O_2$	1.26043, 4°	Nasini and Scala. Bei. 10, 696.
ioxysulphocar- . ?	$C_8H_{14}S_4O_2$	1.19661, 4°	" "

Name.	Formula.	Sp. Gravity.	Autho
Xanthurin	$C_4 H_3 S O_2$	1.012	Couërbe. 40, 297.
Thiacetic acid	$C_2 H_4 S O$	1.074, 10°	Ulrich. J
Ethyl ethylthioglycollate	$C_6 H_{12} S O_2$	1.0469, 4°	Claesson. 28, 445.
Ethyl amylthioglycollate	$C_9 H_{18} S O_2$	.9797, 4°	Claesson. 28, 446.
Ethyl phenylthioglycollate.	$C_{10} H_{12} S O_2$	1.186, 4°	Claesson. 28, 443.
" "	"	1.1269, 15°	
Disulphamylene oxide	$C_{10} H_{20} S_2 O$	1.054, 18°	Guthrie.
Disulphamylene hydrate	$C_{10} H_{22} S_2 O_2$	1.049, 8°	"
Aldehyde with sulphaldehyde.*	$C_2 H_4 O + C_2 H_4 S$	1.134	Weidenbu 550.
Diheptylene sulphoxide	$(C_7 H_{14})_2 S O$	.875, 23°	Schiff. J.
Monosulphhydrin	$C_3 H_8 S O_2$	1.295, 14°.4	Carius. J.
Disulphhydrin	$C_3 H_8 S_2 O$	1.342, 14°.4	Carius. J.
Ethyl thioxalate	$C_6 H_{10} S O_3$	1.1446, 0°	Morley an J. C. S.
Oxysulphobenzid	$C_{12} H_{10} S O_4$	1.3663, 15°	Annaheim. 1149.
Oxyphenyl mercaptan	$C_6 H_6 S O$	1.2373, 0°	Haitinger. 171.
" "	"	1.1889, 100°	
Thiophene aldehyde	$C_5 H_4 S O$	1.215, 21°	Biederman 19, 1853.
Acetothienone	$C_6 H_6 S O$	1.167, 24°	Peter. Ber
Acetoethylthienone	$C_8 H_{10} S O$	1.0959, 20°	Schleicher. 660.
Acetylthioxene	"	1.0910, 17°	Messinger. 2302.

3d. Sulphur Compounds Containing Nitrogen.

Name	Formula.	Sp. Gravity.	Autho
Methyl thiocyanate	$N C S C H_3$	1.115, 16°	Cahours. 18, 261.
" "	"	1.0[illegible]4, 0°	Pierre. C.
" "	"	1.0[illegible]35, 4°	Nasini an Bei. 10,
Ethyl thiocyanate	$N C S C_2 H_5$	1.0[illegible], 16°	Cahours. 18, 265.
"	"	[illegible]	Löwig. 101.
"		[illegible]	Buff. B
"		[illegible]	
"		[illegible]	
		[illegible] 14°	
		[illegible] 4°	Nasini an Bei. 10,

[illegible] mercaptan," and [illegible]

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
'l thiocyanate	N C. S C_3 H_7	.989, 0°	Gerlich. Ber. 8, 651.
"	"	.974, 15°	
"	"	.968, 20°	L. Henry. J. 22, 361.
iocyanate	N C. S C_5 H_{11}	.905, 20°	O. Henry. J. 1, 700.
iocyanate	N C. S C_6 H_{13}	.922, 12°	Pelouze and Cahours. J. 16, 526.
ocyanate	N C. S C_3 H_5	1.071, 0°	Gerlich. Ber. 8, 658.
"	"	1.056, 15°	
hiocarbimide	C S. N C H_3	1.06912, 4°	Nasini and Scala. Bei. 10, 696.
iocarbimide	C S. N C_2 H_5	1.01925, 0°	Buff. Ber. 1, 206.
"	"	.997525, 21°.4	
"	"	.997235, 22°	
"	"	.87909 } 133°.2	
"	"	.873518	
"	"	1.0030, 18°	Gladstone. Bei. 9, 249.
"	"	.99525, 4°	Nasini and Scala. Bei. 10, 696.
butyl thiocarbi-	C S. N C_4 H_9	.9187, 15°	Rudneff. Ber. 12, 1023.
" "	"	.9003, 34°	
iocarbimide	C S. N C_5 H_{11}	.957538, 0°	Buff. Ber. 1, 206.
"	"	.94189, 17°	
"	"	.78749, 182°	
hiocarbimide	C S. N C_6 H_{13}	.9253	Uppenkamp. Ber. 8, 56.
iocarbimide	C S. N C_3 H_5	1.015, 20°	Dumas and Pelouze. Ann. (2), 53, 182.
"	"	1.009 } 15°	Will. A. C. P. 52, 4.
"	"	1.010	
"	"	1.0282, 0°	Kopp. A. C. P. 98, 367.
"	"	1.0173, 10°.1	
"	"	.8739 } 150°.1	Schiff. Ber. 14, 2767.
"	"	.8741	
"	"	.8740, 151°.3	Schiff. Ber. 19, 560.
"	"	1.00572, 4°	Nasini and Scala. Bei. 10, 696.
thiocarbimide	C S. N C_6 H_5	1.135, 15°.5	Hofmann. J. 11, 349.
"	"	1.155, 17°.5	Billeter. C. C. (3), 6, 101.
"	"	.9898, 219°.8	Schiff. Bei. 9, 559.
"	"	1.12891, 4°	Nasini and Scala. Bei. 10, 696.
"	"	1.35	Madan. C. N. 56, 257.
rea	C H_4 N_2 S	1.406, 4°	Schröder. Ber. 12, 561.
	"	1.450	Schröder. Ber. 13, 1070.
	C_6 H_{13} N S_2	1.191, 18°	Wöhler and Liebig. A. C. P. 61, 4.
[illegible]thialdin	C_{21} H_{43} N S_2	.896, 24°	Schiff. J. 21, 724.
[illegible]dithiocyanate	C_{10} H_{20} (C N)$_2$ S_2	1.07, 13°	Guthrie. J. 14, 665.
[illegible] tetrathiocya-	C_{10} H_{20} (C N)$_2$ S_4	1.16, 18°	" "

Name.	Formula.	Sp. Gravity.	Autho[r]
Sulphocarbanilide	$C_{13} H_{12} N_2 S$	1.811 } 4°	Schröder. 1611.
"	"	1.330 } 4°	
Thiocyanacetone	$C_4 H_5 S N O$	1.209, 0°	Tcherniak [illegible] lon. Ber.
"	"	1.195, 20°	
Acetyl thiocyanate	$N C. S C_2 H_3 O$	1.151, 16°	Miquel. C 1202.
Benzoyl thiocyanate	$N C. S C_7 H_5 O$	1.197, 16°	Miquel. C 1210.
Ethyl thiocyanacetate	$C_5 H_7 N S O_2$	1.174	Heintz. J.
" "	"	1.174	Claesson. 1849.
Cystic oxide	$C_3 H_7 N S O_2$	1.7143	Venables. Dict.

4th. Sulphur Compounds Containing Halogens.

Name.	Formula.	Sp. Gravity.	Autho[r]
Tetrachlor-methyl mercaptan.	$C S Cl_4$	1.712, 12°.8	Rathke. A 167, 198.
" "	"	1.722, 0°	Klason. B 2378.
" "	"	1.7049, 11°	
" "	"	1.6953, 17°.5	
Dichlorethyl sulphide	$(C_2 H_3 Cl_2)_2 S$	1.547, 12°	Riche. J.
Tetrachlorethyl sulphide	$(C_2 H Cl_4)_2 S$	1.673, 24°	Regnault. 71, 406.
Ethyl chlorperthiocarbonate.	$C_2 H_5 S_2 Cl_3$	1.1408, 16°	Klason. B 2385.
Ethylene thiodichloride	$C_2 H_4 S Cl_2$	1.408, 13°	Guthrie. J
Ethylene dithiodichloride	$(C_2 H_4)_2 S_2 Cl_2$	1.346, 19°	Guthrie. J
Chlorethylene dithiodichloride.	$(C_2 H_3 Cl)_2 S_2 Cl_2$	1.599, 11°	Guthrie. J.
Dichlorethylene thiodichloride	$(C_2 H_2 Cl_2)_2 S Cl_2$	1.225 } 13°.5	Guthrie. J.
"	"	1.219 } 13°.5	
Amylene thiodichloride	$C_5 H_{10} S Cl_2$	1.138, 14°	Guthrie. J.
Amylene dithiodichloride	[illegible]	1.149, 12°	Guthrie. J.
[illegible] thiodichloride	[illegible]	1.40[illegible], 16°	Guthrie. J 13, 44.
[illegible]	[illegible]	[illegible]	McGowan. (2), 30, 2[illegible]
[illegible]	[illegible]	[illegible]	McGowan. In. Diss. [illegible]
[illegible]	[illegible]	[illegible] 22°.5	Gerhardt and [illegible] cel. J. [illegible]
[illegible]	[illegible]	[illegible]	Gerhardt and [illegible] cel. J. [illegible]
[illegible]	[illegible]	[illegible]	Carius. A. 112, [illegible]
[illegible]	[illegible]	[illegible]	Purgold [illegible]
		[illegible]	
		[illegible] 51°	

Name.	Formula.	Sp. Gravity.	Authority.
Diamylphosphoric acid	$(C_5 H_{11})_2 H P O_4$	1.025, 20°	Fehling.
Triphenyl phosphite	$(C_6 H_5)_3 P O_3$	1.184, 18°	Noack. A. C. P. 218, 99.
Phosphenyl ether	$C_6 H_5 P O_2 (C_2 H_5)_2$	1.032, 16°	Köhler and Michaelis. Ber. 10, 817.
Phenylphosphinic acid	$C_6 H_5 . H_2 P O_3$	1.475, 4°	Schröder. Ber. 12, 561.
Diphenylphosphinic acid	$(C_6 H_5)_2 H P O_2$	1.331, 4°	" "
" "	"	1.347, 4°	" "
Phenoxyldiphenylphosphin.	$C_6 H_5 O (C_6 H_5)_2 P$	1.140, 24°	Michaelis and La Coste. Ber. 18, 2111.
Triphenylphosphin oxide	$(C_6 H_5)_3 P O$	1.2124, 22°.6	Michaelis and La Coste. Ber. 18, 2120.
Naphtylphosphinic acid	$C_{10} H_7 . H_2 P O_3$	1.435, 4°	Schröder. Ber. 12, 561.
" "	"	1.445, 4°	Schröder. Ber. 12, 561.
Naphtylphosphorous acid	$C_{10} H_7 . H_2 P O_2$	1.377, 4°	" "
" "	"	1.441, 4°, after fusion.	" "
Complex ether?	$C_{14} H_{26} P_2 O_8$	.960, 14°	Geuther. A. C. P. 224, 278.
Amylnitrophosphorous acid.	$(C_5 H_{11})_2 H P N O_4$	1.02, 20°	Guthrie. J. 11, 404.
" "	"	1.00, 70°	Guthrie. J. 11, 404.
Ethylphosphorous chloride	$C_2 H_5 P O Cl_2$	1.316, 0°	Menschutkin. A. C. P. 139, 344.
" "	"	1.305265, 0°	Thorpe. J. C. S. 37, 372.
" "	"	1.13989, 117°.5	Thorpe. J. C. S. 37, 372.
Butylphosphorous chloride.	$C_4 H_9 P O Cl_2$	1.191, 0°	Menschutkin. J. 19, 487.
Amylphosphorous chloride.	$C_5 H_{11} P O Cl_2$	1.109, 0°	" "
Diacetone phosphoroso-chloride.	$C_6 H_{10} P O_2 Cl$	1.209, 17°.5	Michaelis. Ber. 18, 900.
Phenylphosphorous chloride.	$C_6 H_5 P O Cl_2$	1.3549	Hölzer. Quoted by Noack.
" "	"	1.348, 18°	Noack. A. C. P. 218, 91.
" "	"	1.3543, 20°	Anschütz and Emery. A. C. P. 239, 310.
Diphenylphosphorous chloride.	$(C_6 H_5)_2 P O_2 Cl$	1.2494	Hölzer. Quoted by Noack.
" "	"	1.221, 18°	Noack. A. C. P. 218, 92.
Phosphenyl chloride	$C_6 H_5 P Cl_2$	1.319, 20°	Michaelis. C. C. 4, 548.
" "	"	1.3428, 0°	Thorpe. J. C. S. 37, 372.
" "	"	1.10415, 224°.6	Thorpe. J. C. S. 37, 372.
Phosphenyl oxychloride	$C_6 H_5 P Cl_2 O$	1.375, 20°	Michaelis. C. C. 4, 548.
Diphenyl phosphochloride	$(C_6 H_5)_2 P Cl$	1.2293, 15°	Michaelis and Link. A. C. P. 207, 209.

Name.	Formula.	Sp. Gravity.	Autho…
Ethyl diamyl borate	$C_2H_5(C_5H_{11})_2BO_3$	.876, 0°	Schiff. A. C
" " "	"	.852, 28°	5th Supp., 1
Diethyl amyl borate	$(C_2H_5)_2C_5H_{11}BO_3$	.858, 26°	"
Amyl metaborate	$C_5H_{11}BO_2$	.971, 0°	Schiff. A. C
" "	"	.949, 20°	5th Supp., 1
Tetraphenyl borate	$(C_6H_5)_4B_2O_5$	1.18	Schiff and 1 J. 19, 468.
" "	"	1.124, 0°	Schiff. A. C
" "	"	1.106, 20°	5th Supp., 2
Ethylene fluoborate	$C_2H_4BFO_2$	1.0478, 28°	Landolph. B 1586.

LXIV. ORGANIC COMPOUNDS OF PHOSPHORUS.

Name.	Formula.	Sp. Gravity.	Authori…
Triethylphosphin	$P(C_2H_5)_3$	.812, 15°.5	Hofmann and hours. J. 1
Monooctylphosphin	$PH_2(C_8H_{17})$	.8209, 17°	Möslinger. B 1007.
Phenylphosphin	$PH_2(C_6H_5)$	1.001, 15°	Köhler and Mi is. Ber. 10,
Diphenylphosphin	$PH(C_6H_5)_2$	1.07, 16°	Dörken. Ber 1508.
Triphenylphosphin	$P(C_6H_5)_3$	1.194	Michaelis and den. A. C. P. 302.
"	"	1.186	Soden. Tübi In. Diss. 188
Dimethylphenylphosphin	$P(CH_3)_2C_6H_5$	.9768, 11°	Michaelis. Be 498.
Diphenylmethylphosphin	$PCH_3(C_6H_5)_2$	1.0784, 15°	Michaelis and 1 A. C. P. 237,
Diethylphenylphosphin	$P(C_2H_5)_2C_6H_5$	.9571, 13°	Michaelis. Be 494.
Ethyl phosphite	$(C_2H_5)_3PO_3$	1.075	Williamson. 563.
Methyl hypophosphate	$(CH_3)_4P_2O_6$	1.109, 15°	Sänger. A. (232, 1.
Ethyl hypophosphate	$(C_2H_5)_4P_2O_6$	1.1170, 15°	"
Propyl hypophosphate	$(C_3H_7)_4P_2O_6$	1.134, 15°	"
Isobutyl hypophosphate	$(C_4H_9)_4P_2O_6$	1.125, 15°	"
Methyl orthophosphate	$(CH_3)_3PO_4$	1.2378, 0°	Weger. A.
" "	"	1.0019, 197°.2	221, 61.
Dimethyl ethyl orthophosphate	$(CH_3)_2C_2H_5.PO_4$	1.1752, 0°	"
" "	"	.95188, 203°.8	
Ethyl orthophosphate	$(C_2H_5)_3PO_4$	1.072, 12°	Limpricht. 471.
Ethyl pyrophosphate	$(C_2H_5)_4P_2O_7$	1.172, 17°	Clermont. J.
Amyl amylphosphite	$(C_5H_{11})_2HPO_3$	.967, 19°.5	Wurtz. A 77.

Name.	Formula.	Sp. Gravity.	Authority.
hosphoric acid	$(C_5H_{11})_2HPO_4$	1.025, 20°	Fehling.
yl phosphite	$(C_6H_5)_3PO_3$	1.184, 18°	Noack. A.C.P. 218, 99.
nyl ether	$C_6H_5PO_2(C_2H_5)_2$	1.032, 16°	Köhler and Michaelis. Ber. 10, 817.
hosphinic acid	$C_6H_5.H_2PO_2$	1.475, 4°	Schröder. Ber. 12, 561.
lphosphinic acid	$(C_6H_5)_2HPO_2$	1.331 } 4°	" "
" "	"	1.347 } 4°	
yldiphenylphos-	$C_6H_5O(C_6H_5)_2P$	1.140, 24°	Michaelis and La Coste. Ber. 18, 2111.
ylphosphin oxide	$(C_6H_5)_3PO$	1.2124, 22°.6	Michaelis and La Coste. Ber. 18, 2120.
lphosphinic acid	$C_{10}H_7.H_2PO_2$	1.435 } 4°	Schröder. Ber. 12, 561.
" "	"	1.445 } 4°	
phosphorous acid	$C_{10}H_7.H_2PO_3$	1.377, 4°	" "
" "	"	1.441, 4°, after fusion.	
ether?	$C_{14}H_{36}P_2O_3$	.960, 14°	Geuther. A. C. P. 224, 278.
rophosphorous	$(C_5H_{11})_2HPNO_4$	1.02, 20°	Guthrie. J. 11, 404.
"	"	1.00, 70°	
osphorous chloride	$C_2H_5POCl_2$	1.316, 0°	Menschutkin. A. C. P. 139, 344.
" "	"	1.305265, 0°	Thorpe. J. C. S. 37, 372.
" "	"	1.13989, 117°.5	
osphorous chlo-	$C_4H_9POCl_2$	1.191, 0°	Menschutkin. J. 19, 487.
osphorous chlo-	$C_5H_{11}POCl_2$	1.109, 0°	" "
e phosphoroso- de.	$C_6H_{10}PO_2Cl$	1.209, 17°.5	Michaelis. Ber. 18, 900.
hosphorous chlo-	$C_6H_5POCl_2$	1.3549	Hölzer. Quoted by Noack.
" "	"	1.348, 18°	Noack. A. C. P. 218, 91.
" "	"	1.3543, 20°	Anschütz and Emery. A.C.P. 239, 310.
lphosphorous le.	$(C_6H_5)_2PO_2Cl$	1.2494	Hölzer. Quoted by Noack.
"	"	1.221, 18°	Noack. A. C. P. 218, 92.
nyl chloride	$C_6H_5PCl_2$	1.319, 20°	Michaelis. C. C. 4, 548.
"	"	1.3428, 0°	Thorpe. J. C. S. 37, 372.
"	"	1.10415, 224°.6	
yl oxychloride	$C_6H_5PCl_2O$	1.375, 20°	Michaelis. C. C. 4, 548.
phosphochloride	$(C_6H_5)_2PCl$	1.2293, 15°	Michaelis and Link. A. C. P. 207, 209.

Name.	Formula.	Sp. Gravity.	Authori
Metachlorocarbonylphenylorthophosphoric chloride.	$C_7 H_4 P O_2 Cl_3$	1.54844, 20°	Anschüt Moore. 239, 335.
Parachlorocarbonylphenylorthophosphoric chloride.	"	1.54219, 20°	Anschüt Moore. 239, 344.
By action of $P Cl_5$ on salicylic acid.	$C_7 H_4 P O_2 Cl_3$	1.62019, 20°	Anschüt Moore. 239, 320.
Paraxylylphosphochloride.	$C_8 H_9 P Cl_2$	1.25, 18°	Weller. 1494.
Paraxylylphosphoroxychloride.	$C_8 H_9 P O Cl_2$	1.31, 18°	"
Sulphophosphorous ether.	$(C_2 H_5)_3 P S_3$	1.24, 12°	Michaelis. (57.
Ethyl pyrosulphophosphate.	$(C_2 H_5)_4 P_2 S_3 O_4$	1.1892, 17°	Michaelis. 164, 9.
Amyl sulphophosphate	$(C_5 H_{11})_3 P S O_3$	.849, 12°	Chevrier. J.
Ethylsulphophosphorous chloride.	$C_2 H_5 P S Cl_2$	1.30, 12°	Michaelis. (57.
Triethoxylpyrophosphorsulphobromide.	$(C_2 H_5)_3 Br P_2 S_3 O_3$	1.3567, 19°	Michaelis. 164, 9.
Phosphenyl sulphochloride.	$C_6 H_5 P Cl_2 S$	1.376, 13°	Köhler and is. Ber.
Triphenyltrisulphophosphamide.	$(C_6 H_5)_3 H_3 N_3 P S$	1.34	Chevrier. J.

LXV. ORGANIC COMPOUNDS OF VANADIUM, ARSE ANTIMONY, AND BISMUTH.

Name.	Formula.	Sp. Gravity.	Authori
Ethyl orthovanadate	$(C_2 H_5)_3 V O_4$	1.167, 17°.5	Hall. J. C. 752.
Dimethylarsine oxide	$(As (C_2 H_6)_2) O$	1.462, 15°	Bunsen. P. 224.
Triethylarsine	$As (C_2 H_5)_3$	1.151, 16°.7	Landolt. J.
Methyl arsenite	$(C H_3)_3 As O_3$	1.428, 9°.6	Crafts. Z. 324.
Ethyl arsenite	$(C_2 H_5)_3 As O_3$	1.224, 0°	Crafts. J.
Amyl arsenite	$(C_5 H_{11})_3 As O_3$	1.0525, 0°	Crafts.
Methyl arsenate	$(C H_3)_3 As O_4$	1.5591, 14°.5	Crafts. Z. 324.
Ethyl arsenate	$(C_2 H_5)_3 As O_4$	1.[illegible]4, 0°	Crafts. J.
" "	"	1.[illegible]161, 8°.8	
Phenylarsenic acid	$C_6 H_7 As O_3$	[illegible]760 } 4°	[illegible]
" "	"	[illegible] } 4°	
" "	"	[illegible]905 } 4°	
Diphenylarsenic acid	$C_{12} H_{11} As O_2$	1.545, 4°	

[N]AME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
[ar]sine chloride	$As (C_6 H_5)_2 Cl$	1.42231, 15°	La Coste and Michaelis. Ber. 11, 1885.
ne bromide	$As (C_6 H_5) Br_2$	2.0983, 15°	Michaelis. Ber. 10, 626.
arsenite	$As (S C_2 H_5)_3$	1.3141, 16°	Claesson. Lund Arsskrift, 1884–'5.
stibine	$Sb (C H_3)_3$	1.523, 15°	Landolt. J. 14, 569.
bine	$Sb (C_2 H_5)_3$	1.3244, 16°	Löwig and Schweitzer. J. 8, 471.
bine	$Sb (C_5 H_{11})_3$	1.1333, 17°	Berlé. J. 8, 586.
	"	1.0587	Cramer. J. 8, 590.
ibine chloride	$Sb (C_2 H_5)_3 Cl_2$	1.540, 17°	Löwig and Schweitzer. J. 8, 476.
ibine bromide	$Sb (C_2 H_5)_3 Br_2$	1.953, 17°	" "
stibine	$Sb (C_6 H_5)_3$	1.4998, 12°	Michaelis and Reese. A. C. P. 233, 46.
ylstibine	$Sb (C_7 H_7)_3$	1.3957, 15°.7	Michaelis and Genzken. A. C. P. 242, 185.
ylstibine	"	1.35448, 15°.6	Michaelis and Genzken. A. C. P. 242, 169.
imethyl	$Bi (C H_3)_3$	2.30, 18°	Marquandt. Ber. 20, 1517.
iethyl	$Bi (C_2 H_5)_3$	1.82	Breed. J. 5, 602.
iphenyl	$Bi (C_6 H_5)_3$	1.5851, 20°	Michaelis and Polis. Ber. 20, 55.

LXVI. ORGANIC COMPOUNDS OF SILICON.

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
rethyl	$Si (C_2 H_5)_4$	.7657, 22°.7	Friedel and Crafts. A. J. S. (2), 49, 311.
"	"	.8341, 0°	Ladenburg. B. S. C. 18, 240.
xethyl	$Si_2 (C_2 H_5)_6$	.8510, 0°	Friedel and Ladenburg. A. C. P. 203, 251.
"	"	.8408, 20°	Friedel and Ladenburg. A. C. P. 203, 251.
rapropyl	$Si (C_3 H_7)_4$	.7979, 0°	Pape. Ber. 14, 1872.
"	"	.7883, 15°	Pape. Ber. 14, 1872.
ane	$Si C_8 H_{18}$	.7510, 0°	Ladenburg. A. C. P. 164, 300.
[illegible]	$Si C_9 H_{22}$	.7728, 0°	Pape. Ber. 14, 1872.
	"	.7621, 15°	Pape. Ber. 14, 1872.
	$Si (C_2 H_5)_3 C_6 H_5$	.9042, 0°	Ladenburg. C. C. 5, 312.

NAME.	FORMULA.	SP. GRAVITY.	AUTHOR
Silicon tetraphenyl	$Si (C_6 H_5)_4$	1.078, 20°	Polis. Ber.
Para-silicon tetratolyl	$Si (C_7 H_7)_4$	1.0793, 20°	"
Meta-silicon tetratolyl	"	1.1188, 20°	"
Silicon tetrabenzyl	"	1.0776, 20°	"
Ethyl metasilicate	$(C_2 H_5)_2 Si O_3$	1.079, 24°	Ebelmen. 57, 339.
Methyl orthosilicate	$(C H_3)_4 Si O_4$	1.0589, 0°	Friedel and J. 18, 465.
Trimethyl ethyl orthosilicate.	$(C H_3)_3 C_2 H_5 Si O_4$	1.023	Friedel and J. 19, 491.
Dimethyl diethyl orthosilicate.	$(C H_3)_2 (C_2 H_5)_2 Si O_4$	1.004, 0°	"
Methyl triethyl orthosilicate.	$C H_3 (C_2 H_5)_3 Si O_4$	.989, 0°	"
Ethyl orthosilicate	$(C_2 H_5)_4 Si O_4$	.932	Ebelmen. 52, 324.
" "	"	.933, 20°	Ebelmen. 57, 334.
" "	"	.9676, 0°	Friedel and A. J. S. (2),
" "	"	.9330, 22°.5	Mendelejeff.
Propyl orthosilicate	$(C_3 H_7)_4 Si O_4$	.915, 18°	Cahours. C.
Butyl orthosilicate	$(C_4 H_9)_4 Si O_4$	.953, 15°	Cahours. C.
Triethyl amyl orthosilicate	$(C_2 H_5)_3 C_5 H_{11} Si O_4$	.926, 0°	Friedel and A. J. S. 168.
Diethyl diamyl orthosilicate.	$(C_2 H_5)_2 (C_5 H_{11})_2 Si O_4$	.915, 0°	Friedel and J. 19, 489.
Ethyl triamyl orthosilicate	$C_2 H_5 (C_5 H_{11})_3 Si O_4$	.913, 0°	"
Amyl orthosilicate	$(C_5 H_{11})_4 Si O_4$	.868, 20°	Ebelmen. 57, 344.
Hexmethyl disilicate	$(C H_3)_6 Si_2 O_7$	1.1441, 0°	Friedel and J. 18, 465.
Hexethyl disilicate	$(C_2 H_5)_6 Si_2 O_7$	1.0196, 0°	Friedel and J. 19, 489.
" "	"	1.0019, 19°.2	
Octethyl tetrasilicate	$C_{16} H_{40} Si_4 O_{12}$	1.071, 0°	Troost and feuille. 19, 255.
" "	"	1.054, 14°.5	
Ethyl silicoacetate	$C_7 H_{18} Si O_3$	.9253, 0°	Ladenburg. (2), 12, 40.
Methyl silicopropionate	$C_5 H_{14} Si O_3$	.9747, 0°	Ladenburg. 173, 143.
Ethyl silicopropionate	$C_9 H_{22} Si O_3$	.9207, 0°	Friedel and burg. A. 159, 259.
Ethyl silicobenzoate	$C_{12} H_{20} Si O_3$	1.0133, 0°	Ladenburg. (2), 11, [illegible]
" "	"	1.0055, 10°	
Silicon diethyl diethylate	[illegible]	[illegible]	Ladenburg. 164, 300.
[illegible]	[illegible]	[illegible]	"
[illegible]	[illegible]	[illegible]	Ladenburg. 730.
[illegible]		[illegible]	Ladenburg. 164, [illegible]
[illegible]	[illegible]	[illegible]	"
[illegible]	[illegible]	[illegible]	"

AME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
l chloride	$Si\ C_6\ H_{15}\ Cl$	.9249, 0°	Ladenburg. A. C. P. 164, 300.
ic monochlor-	$Si\ C_3\ H_9\ Cl\ O_3$	1.1954, 0°	Friedel and Crafts. J. 19, 490.
ic dichlorhy-	$Si\ C_2\ H_6\ Cl_2\ O_2$	1.2595	" "
: monochlorhy-	$Si\ C_6\ H_{15}\ Cl\ O_3$	1.0483, 0°	Friedel and Crafts. A. J. S. (2), 48, 160.
:dichlorhydrin	$Si\ C_4\ H_{10}\ Cl_2\ O_2$	1.144, 0°	Friedel and Crafts. J. 19, 488.
:trichlorhydrin	$Si\ C_2\ H_5\ Cl_3\ O$	1.241, 0°	Friedel and Crafts. J. 19, 489.
ic monochlor-	$Si\ C_9\ H_{21}\ Cl\ O_3$	.980	Cahours. C. C. 4, 482.
ic dichlorhy-	$Si\ C_6\ H_{14}\ Cl_2\ O_2$	1.028	" "
of silicon tri- nyl.	$Si\ C_{12}\ H_{19}\ Cl$	1.1086, 0°	Ladenburg. A. C. P. 173, 143.
iform	$Si\ H\ I_3$	3.362, 0°	Friedel. A. C. P. 149, 96.
"	"	3.314, 20°	

LXVII. ORGANIC COMPOUNDS OF TIN.

AME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
iethyl	$Sn\ (C\ H_3)_4$	1.3138, 0°	Ladenburg. Z. C. 13, 605.
·l	$Sn_2\ (C_2\ H_5)_4$	1.558, 15°	Löwig. J. 5, 584.
	"	1.192	Buckton. J. 11, 392.
stannethyl"	"	1.410	Löwig. J. 5, 585.
yl	$Sn_2\ (C_2\ H_5)_6$	1.4115, 0°	Ladenburg. Z. C. 13, 604.
ıyl	$Sn\ (C_2\ H_5)_4$	1.187, 18°.6	Frankland. J. 12, 411.
rimethyl	$Sn\ C_2\ H_5\ (C\ H_3)_3$	1.243	Cahours. J. 14, 551.
ldimethyl	$Sn\ (C_2\ H_5)_2\ (C\ H_3)_2$	1.2319, 19°	Frankland. J. 12, 412.
'	"	1.2509, 0°	Two lots. Morgunoff. Z. C. 10, 370.
'	"	1.2603, 0°	
ropyl	$Sn\ (C_3\ H_7)_4$	1.179, 14°	Cahours. B. S. C. 20, 190.
ylphenyl	$Sn\ (C_2\ H_5)_3\ C_6\ H_5$	1.2639, 0°	Ladenburg. A. C. P. 159, 251.
yl ethylate	$Sn\ (C_2\ H_5)_3\ C_2\ H_5\ O$	1.2634, 0°	Ladenburg. A. C. P., 8th Supp., 60.
hyl iodide	$Sn\ (C\ H_3)_2\ I_2$	2.872, 22°	Cahours. J. 12, 427.
yl iodide	$Sn\ (C\ H_3)_3\ I$	2.155, 18°	Cahours. J. 12, 429.
"	"	2.1432, 0°	Ladenburg. Z. C. 13, 605.
"	"	2.1096, 18°	
iodide	$Sn\ (C_2\ H_5)_2\ I_2$	1.8	Cahours. J. 12, 424.
"	"	2.0329, 15°	Frankland. J. 12, 418.

NAME.	FORMULA.	SP. GRAVITY.	AUTHO
Stanntriethyl chloride	$Sn(C_2H_5)_3Cl$	1.428, 8°	Cahours. J
" "	"	1.320	Löwig. J
Stanntriethyl bromide	$Sn(C_2H_5)_3Br$	1.630	"
Stanntriethyl iodide	$Sn(C_2H_5)_3I$	1.850	"
" "	"	1.833, 22°	Cahours. J
Stanntripropyl iodide	$Sn(C_3H_7)_3I$	1.692, 16°	Cahours. B 301.
Stanntributyl iodide	$Sn(C_4H_9)_3I$	1.540, 15°	Cahours. C
"Ethstannethyl chloride"	$Sn_2C_{10}H_{25}Cl$	1.30	Löwig. J.
"Ethstannethyl bromide"	$Sn_2C_{10}H_{25}Br$	1.48	"
"Ethstannethyl iodide"	$Sn_2C_{10}H_{25}I$	1.724	"

LXVIII. ORGANIC COMPOUNDS OF ALUMINUM

NAME.	FORMULA.	SP. GRAVITY.	AUTHO
Aluminum ethylate	$Al(C_2H_5O)_3$	1.147, 4°	Gladstone C. N. 42
Aluminum propylate	$Al(C_3H_7O)_3$	1.026, 4°	"
Aluminum butylate	$Al(C_4H_9O)_3$	.9825, 4°	"
Aluminum amylate	$Al(C_5H_{11}O)_3$	.9804, 4°	"
Aluminum phenylate	$Al(C_6H_5O)_3$	1.25, 4°	"
Aluminum cresylate	$Al(C_7H_7O)_3$	1.166, 4°	"
Aluminum thymolate	$Al(C_{10}H_{13}O)_3$	1.04, 4°	"
Aluminum chloride and benzene.	$AlCl_3 . 3C_6H_6$	1.14, 0°	Gustavson. 2152.
" "	"	1.12, 20°	
Aluminum chloride and toluene.	$AlCl_3 . 3C_7H_8$	1.08, 0°	"
" "	"	1.06, 22°	
Aluminum chloride and cymene.	$2AlCl_3 . 3C_{10}H_{14}$	1.139, 0°	Gustavson. 694.
" "	"	1.127, 18°	
Aluminum bromide and benzene.	$AlBr_3 . 3C_6H_6$	1.49, 0°	Gustavson. 1845.
" "	"	1.47, 20°	
Aluminum bromide and toluene.	$AlBr_3 . 3C_7H_8$	1.37, 0°	Gustavson. 1843.
" "	"	1.35, 20°	
Aluminum bromide and cymene.	$2AlBr_3 . 3C_{10}H_{14}$	1.493, 0°	Gustavson. 694.
" "	"	1.477, 16°	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
rontium copper formate	$Sr_2Cu(CHO_2)_6 . 8H_2O$	2.132	Schröder. Ber. 14, 24.
" " "	"	2.133	
arium copper formate	$Ba_2Cu(CHO_2)_6 . 4H_2O$	2.747	" "
dymium formate	$Di(CHO_2)_3$	3.427, 20°	Cleve. U. N. A. 1885.
" "	"	3.433, 20°	
amarium formate	$Sm(CHO_2)_3$	3.730, 20°	" "
" "	"	3.732, 20°	
" "	"	3.737, 20°	
odium acetate	$NaC_2H_3O_2$	1.421, 14°	Bodeker. B. D. Z.
" "	"	1.524	Schröder. Ber. 14, 1608.
" "	"	1.529	
" "	"	1.53	Brügelmann. Ber. 17, 2359.
" "	$NaC_2H_3O_2 . 3H_2O$	1.420	Buignet. J. 14, 15.
" "	"	1.40, 12°	Bödeker. B. D. Z.
" "	"	1.450	Schröder. Ber. 14, 1608.
" "	"	1.456	
Sodium triacetate	$NaC_6H_{11}O_6$	1.47	Lescoeur. C. R. 78, 1046.
Potassium triacetate	$KC_6H_{11}O_6$	1.84	" "
Silver acetate	$AgC_2H_3O_2$	3.1281, 15°	Liebig and Redtenbacher. P. M. (3), 19, 227.
" "	"	3.222	Schröder. Ber. 9, 1888.
" "	"	3.259	
Magnesium acetate	$Mg(C_2H_3O_2)_2$	1.419	Schröder. Ber. 14, 1610.
" "	"	1.422	
" "	$Mg(C_2H_3O_2)_2 . 4H_2O$	1.453	" "
" "	"	1.455	
" "	"	1.4487	Kubel. Ber. 19, ref. 283.
Zinc acetate	$Zn(C_2H_3O_2)_2$	1.810	Schröder. Ber. 14, 1610.
" "	"	1.869	
" "	$Zn(C_2H_3O_2)_2 . 2H_2O$	1.735	" "
" "	$Zn(C_2H_3O_2)_2 . 3H_2O$	1.7175, 12°	Bödeker. B. D. Z.
Cadmium acetate	$Cd(C_2H_3O_2)_2$	2.329	Schröder. Ber. 14, 1611.
" "	"	2.352	
" "	$Cd(C_2H_3O_2)_2 . 2H_2O$	1.998	" "
" "	"	2.021	
Mercuric acetate	$Hg(C_2H_3O_2)_2$	3.2544, 22°	Hagemann. F. W. C.
" "	"	3.2861, 23°	
Strontium acetate	$Sr(C_2H_3O_2)_2$	2.099	Schröder. Ber. 14, 1608.
" "	$2Sr(C_2H_3O_2)_2 . 3H_2O$	1.981	" "
" "	"	2.018	
Barium acetate	$Ba(C_2H_3O_2)_2$	2.440	Schröder. Ber. 11, 2129.
" "	"	2.486	
" "	"	2.316	Two lots. Schröder. Ber. 12, 561.
" "	"	2.440	
" "	"	2.480	Schröder. Ber. 14, 1608.
" "	$Ba(C_2H_3O_2)_2 . H_2O$	2.19, 13°	Bödeker. B. D. Z.
" "	$Ba(C_2H_3O_2)_2 . 3H_2O$	2.014	Schröder. Ber. 14, 1608.
" "	"	2.026	
Lead acetate	$Pb(C_2H_3O_2)_2$	3.238	Schröder. Ber. 14, 1609.
" "	"	3.264	

LXX. METALLIC SALTS OF ORGANIC ACIDS.

Name.	Formula.	Sp. Gravity.	Author
Lithium formate	$Li\,C\,H\,O_2.\,H_2\,O$	1.435	Schröder. I
" "	"	1.479	21.
Sodium formate	$Na\,C\,H\,O_2$	1.907	"
" "	"	1.931	
Potassium formate	$K\,C\,H\,O_2$	1.896	"
" "	"	1.920	
Ammonium formate	$Am\,C\,H\,O_2$	1.264	"
" "	"	1.271	
Zinc formate	$Zn\,C_2\,H_2\,O_4$	2.368	Schröder. I 23.
" "	$Zn\,C_2\,H_2\,O_4.\,2\,H_2\,O$	2.339	Schröder. 199.
" "	"	2.205	Schröder. I 23.
" "	"	2.1575, 21°.3	Breen. F.
Cadmium formate	$Cd\,C_2\,H_2\,O_4.\,2\,H_2\,O$	2.429, 20°.2	"
" "	"	2.427	Schröder. I
" "	"	2.477	22.
Calcium formate	$Ca\,C_2\,H_2\,O_4$	2.021	Schröder. 199.
" "	"	2.009	Schröder.
" "	"	2.015	22.
Strontium formate	$Sr\,C_2\,H_2\,O_4$	2.667	"
" "	$Sr\,C_2\,H_2\,O_4.\,2\,H_2\,O$	2.252, cryst.	Schröder.
" "	"	2.266, pulv.	199.
" "	"	2.244, m. of 3	Schröder. I 22.
Barium formate	$Ba\,C_2\,H_2\,O_4$	3.193, cryst.	Schröder. I
" "	"	3.219, pulv.	199.
" "	"	3.203	Two lots. Sc
" "	"	3.233	Ber. 11. 21
Lead formate	$Pb\,C_2\,H_2\,O_4$	4.56, 11°	Bödeker an secke. B.
" "	"	4.507	Schröder. Du
" "	"	4.555	
" "	"	4.610, cryst.	Schröder. I
" "	"	4.621, pulv.	199.
Manganese formate	$Mn\,C_2\,H_2\,O_4$	2.205	Schröder. B 23.
" "	$Mn\,C_2\,H_2\,O_4.\,2\,H_2\,O$	1.947	"
" "	"	1.954	
" "	"	[illegible]	
Nickel formate	$Ni\,C_2\,H_2\,O_4.\,2\,H_2\,O$	[illegible], 20°.2	H. Stallo. F.
Cobalt formate	$Co\,C_2\,H_2\,O_4.\,2\,H_2\,O$	[illegible], 20°.2	"
" "	"	[illegible]	
Copper formate	$Cu\,C_2\,H_2\,O_4.\,4\,H_2\,O$	[illegible]	Gehlen. A 213.
" "	"	[illegible], pulv.	Schröder. I
" "	"	[illegible], cryst.	199.
" "	"	[illegible]	Schröder. I 23.
[illegible]	[illegible]	[illegible]	Schröder. 24.

Name.	Formula.	Sp. Gravity.	Authority.
Silver butyrate	$Ag\,C_4\,H_7\,O_2$	2.353, 4°	Schröder. Ber. 10, 848.
Barium butyrate	$Ba\,(C_4\,H_7\,O_2)_2$	1.768, 22°	Stern. F. W. C.
Barium isobutyrate	"	1.779	Schröder. Ber. 11, 2130.
" "	"	1.800	
Silver isovalerate. Ppt.	$Ag\,C_5\,H_9\,O_2$	2.110, 4°	Schröder. Ber. 10, 848.
" " Cryst.	"	2.118, 4°	
Silver caproate	$Ag\,C_6\,H_{11}\,O_2$	2.029, ppt.	From two caproic acids, probably not identical. Schröder. Ber. 10, 1872.
" "	"	2.052, cryst.	
" "	"	2.053, "	
" "	"	1.866, "	
" "	"	1.877, "	
Silver caprylate	$Ag\,C_8\,H_{15}\,O_2$	1.740, ppt.	Schröder. Ber. 10, 1873.
" "	"	1.771, cryst.	
Potassium methylsulphate	$K\,C\,H_3\,S\,O_4$	2.057	Schröder. Ber. 11, 2020.
Barium methylsulphate	$Ba\,(C\,H_3\,SO_4)_2 . 2\,H_2O$	2.276, 20°.2	Geppert. F. W. C.
" "	"	2.258	Schröder. Ber. 11, 2130.
" "	"	2.275	
Potassium ethylsulphate	$K\,C_2\,H_5\,S\,O_4$	1.792	Schröder. Ber. 11, 2020.
" "	"	1.809	
Barium ethylsulphate	$Ba\,(C_2H_5SO_4)_2 . 2\,H_2O$	2.0714, 22°.6	Geppert. F. W. C.
" "	"	2.080, 21°.7	
" "	"	2.055	Schröder. Ber. 11, 2130.
Didymium ethylsulphate	$Di\,(C_2H_5SO_4)_3 . 9\,H_2O$	1.860, 17°.8	Cleve. U. N. A. 1885.
" "	"	1.867, 18°	
Samarium ethylsulphate	$Sm(C_2H_5SO_4)_3 . 9\,H_2O$	1.874, 20°.8	" "
" "	"	1.885, 20°.8	
Potassium propylsulphate	$K\,C_3\,H_7\,S\,O_4$	1.794	Schröder. Ber. 11, 2020.
" "		1.831	
Barium propylsulphate	$Ba\,(C_3H_7S\,O_4)_2 .\ 2\,H_2O$	1.839, 20°.5	Geppert. F. W. C.
" "	"	1.844, 20°.5	
" "	"	1.844	Schröder. Ber. 11, 2130.
Potassium isobutylsulphate.	$K\,C_4\,H_9\,S\,O_4$	1.472	Schröder. Ber. 11, 2020.
"	"	1.486	
Barium isobutylsulphate	$Ba\,(C_4H_9S\,O_4)_2 .\ 2\,H_2O$	1.714, 22°	Whetstone. F.W.C.
" "	"	1.743, 24°.3	Schuermann. F.W.C.
" "	"	1.778, 21°.2	
" "	"	1.727	Schröder. Ber. 11, 2130.
" "	"	1.738	
Potassium amylsulphate	$K\,C_5\,H_{11}\,S\,O_4$	1.401	Schröder. Ber. 11, 2020.
" "	"	1.418	
Barium amylsulphate	$Ba(C_5H_{11}SO_4)_2 .\ 2H_2O$	1.623, 21°.2	Whetstone. F.W.C.
" "	"	1.632, 22°	
" "	"	1.638	Schröder. Ber. 11, 2130.
" "	"	1.641	
Potassium methylxanthate	$K\,C\,H_3\,C\,O\,S_2$	1.6754, 15°.2	Bishop. F.W.C.
" "	"	1.7002	
Potassium ethylxanthate	$K\,C_2\,H_5\,C\,O\,S_2$	1.558, 21°	Geppert. F. W. C.
" "	"	1.5564, 18°.2	H. Stallo. F. W. C.
" "	"	1.5576, 21°.5	
Potassium isobutylxanthate.	$K\,C_4\,H_9\,C\,O\,S_2$	1.3713, 15°	" "
"	"	1.3832, 14°.5	

Name.	Formula.	Sp. Gravity.	Author
Lead acetate	$Pb(C_2H_3O_2)_2 . 3H_2O$	2.496	Buignet.
" "	"	2.559, 13°	Schröder.
" "	"	2.540	Schröder.
" "	"	2.560	1609.
" "	"	2.460	W. C. Smi
			J. P. 53,
Manganese acetate	$Mn(C_2H_3O_2)_2$	1.737	Schröder.
" "	"	1.753	1610.
" "	$Mn(C_2H_3O_2)_2 . 4H_2O$	1.588	"
" "	"	1.590	
Nickel acetate	$Ni(C_2H_3O_2)_2$	1.797	"
" "	"	1.799	
" "	$Ni(C_2H_3O_2)_2 . 4H_2O$	1.7346, 17°.2	H. Stallo.
" "	"	1.7443, 15°.7	
" "	"	1.734	Schröder.
" "	"	1.753	1610.
Cobalt acetate	$Co(C_2H_3O_2)_2 . 4H_2O$	1.7031, 15°.7	H. Stallo.
" "	"	1.7043, 18°.7	
Copper acetate	$Cu(C_2H_3O_2)_2$	1.920	Schröder.
" "	"	1.939	1609.
" "	$Cu(C_2H_3O_2)_2 . H_2O$	1.914, 20°	Gehlen.
			83, 218.
" "	"	1.880, m. of 4	Schröde
" "	"	1.875 extreme	
" "	"	1.885 11°.	1873.
" "	"	1.875	Schröder.
" "	"	1.890	1609.
Didymium acetate	$Di(C_2H_3O_2)_3$	2.125, 18°.5	Cleve.
" "	"	2.190, 16°.5	1885.
" "	$Di(C_2H_3O_2)_3 . H_2O$	2.230 20°	"
" "	"	2.244	
" "	$Di(C_2H_3O_2)_3 . 4H_2O$	1.881 13°.5	"
" "	"	1.884	
Samarium acetate	$Sm(C_2H_3O_2)_3$	2.208, 18°.3	"
" "	$Sm(C_2H_3O_2)_3 . 4H_2O$	1.942, 14°.5	"
" "	"	1.938, 15°.5	
Calcium copper acetate	$CaCu(C_2H_3O_2)_4 . 8H_2O$	1.4206	Schabus.
Lithium uranyl acetate	$LiUO_2(C_2H_3O_2)_3 . 3H_2O$	2.280, 15°	Wyrouboff. 8, 118.
Sodium uranyl acetate	$NaUO_2(C_2H_3O_2)_3$	2.55, 12°	Bödeker an secke.
Sodium uranyl monochlor-acetate.	$NaUO_2(C_2H_2ClO_2)_3 . 2H_2O$	2.748, 14°	Clarke. 331.
Silver propionate	$AgC_3H_5O_2$	2.714	Schröder. 1872.
Barium propionate	$Ba(C_3H_5O_2)_2$	2.067, 22°.3	Stern.
" "	"	1.970	Schröder. 2129.
Didymium propionate	$Di(C_3H_5O_2)_3$	1.861, 12°.5	Cleve. 1885.
" "	$Di(C_3H_5O_2)_3 . 3H_2O$	1.741, 12°.5	"
" "	"	1.742, 12°	
Samarium propionate	$Sm(C_3H_5O_2)_3$	1.894, 14°	"
" "	$Sm(C_3H_5O_2)_3 . 3H_2O$	1.784	"
" "	"	1.786 12°.2	
" "	"	1.788	

Name.	Formula.	Sp. Gravity.	Authority.
utyrate	$Ag\ C_4\ H_7\ O_2$	2.353, 4°	Schröder. Ber. 10, 848.
butyrate	$Ba\ (C_4\ H_7\ O_2)_2$	1.768, 22°	Stern. F. W. C.
isobutyrate	“	1.779	Schröder. Ber. 11, 2130.
“	“	1.800	
ovalerate. Ppt.	$Ag\ C_5\ H_9\ O_2$	2.110, 4°	Schröder. Ber. 10, 848.
“ Cryst.	“	2.118, 4°	
aproate	$Ag\ C_6\ H_{11}\ O_2$	2.029, ppt.	From two caproic acids, probably not identical. Schröder. Ber. 10, 1872.
“	“	2.052, cryst.	
“	“	2.053, “	
“	“	1.866, “	
“	“	1.877, “	
aprylate	$Ag\ C_8\ H_{15}\ O_2$	1.740, ppt.	Schröder. Ber. 10, 1873.
“	“	1.771, cryst.	
um methylsulphate	$K\ C\ H_3\ S\ O_4$	2.057	Schröder. Ber. 11, 2020.
methylsulphate	$Ba(C\ H_3SO_4)_2.\ 2\ H_2O$	2.276, 20°.2	Geppert. F. W. C.
“	“	2.258	Schröder. Ber. 11, 2130.
“	“	2.275	
um ethylsulphate	$K\ C_2\ H_5\ S\ O_4$	1.792	Schröder. Ber. 11, 2020.
“	“	1.809	
ethylsulphate	$Ba\ (C_2H_5SO_4)_2.\ 2\ H_2O$	2.0714, 22°.6	Geppert. F. W. C.
“	“	2.080, 21°.7	
“	“	2.055	Schröder. Ber. 11, 2130.
um ethylsulphate	$Di\ (C_2H_5SO_4)_3.\ 9\ H_2O$	1.860, 17°.8	Cleve. U. N. A. 1885.
“	“	1.867, 18°	
m ethylsulphate	$Sm(C_2H_5SO_4)_3.9\ H_2O$	1.874, 20°.8	“ “
“	“	1.885, 20°.8	
um propylsulphate	$K\ C_3\ H_7\ S\ O_4$	1.794	Schröder. Ber. 11, 2020.
“		1.831	
propylsulphate	$Ba\ (C_3H_7S\ O_4)_2.\ 2\ H_2O$	1.839, 20°.5	Geppert. F. W. C.
“	“	1.844, 20°.5	
“	“	1.844	Schröder. Ber. 11, 2130.
um isobutylsul-	$K\ C_4\ H_9\ S\ O_4$	1.472	Schröder. Ber. 11, 2020.
“	“	1.486	
isobutylsulphate	$Ba\ (C_4H_9S\ O_4)_2.\ 2\ H_2O$	1.714, 22°	Whetstone. F.W.C.
“	“	1.743, 24°.3	Schuermann. F.W. C.
“	“	1.778, 21°.2	
“	“	1.727	Schröder. Ber. 11, 2130.
“	“	1.738	
um amylsulphate	$K\ C_5\ H_{11}\ S\ O_4$	1.401	Schröder. Ber. 11, 2020.
“	“	1.418	
amylsulphate	$Ba(C_5H_{11}SO_4)_2.\ 2H_2O$	1.623, 21°.2	Whetstone. F.W.C.
“	“	1.632, 22°	
“	“	1.638	Schröder. Ber. 11, 2130.
“	“	1.641	
um methylxanthate	$K\ C\ H_3\ C\ O\ S_2$	1.6754, 15°.2	Bishop. F.W.C.
“	“	1.7002	
um ethylxanthate	$K\ C_2\ H_5\ C\ O\ S_2$	1.558, 21°	Geppert. F. W. C.
“	“	1.5564, 18°.2	H. Stallo. F. W. C.
“	“	1.5576, 21°.5	
um isobutylxan-	$K\ C_4\ H_9\ C\ O\ S_2$	1.3718, 15°	“ “
“	“	1.3832, 14°.5	

NAME.	FORMULA.	SP. GRAVITY.	AUTHO
Lithium oxalate	$Li_2 C_2 O_4$	2.1218, 17°.5	Stolba. J.
Sodium hydrogen oxalate	$Na H C_2 O_4 . H_2 O$	2.815	Buignet.
Potassium oxalate	$K_2 C_2 O_4 . H_2 O$	2.104, m. of 2	Playfair a M. C. S.
" "	"	2.08	Schiff. J.
Potassium hydrogen oxalate.	$K H C_2 O_4$	1.965, m. of 2	Playfair a M. C. S.
" " "	"	2.030	Schiff. J.
" " "	"	2.088	Buignet.
Potassium quadroxalate	$K H_3 (C_2 O_4)_2 . 2 H_2 O$	1.817	Playfair a M. C. S.
" "	"	1.765	Schiff. J.
" "	"	1.836	Buignet.
Rubidium quadroxalate	$Rb H_3 (C_2 O_4)_2 . 2 H_2 O$	2.1246, 18°	Stolba. J.
Ammonium oxalate	$Am_2 C_2 O_4 . H_2 O$	1.461, m. of 2	Playfair a M. C. S.
" "	"	1.475	Schiff. J.
" "	"	1.470	Buignet.
" "	"	1.501	Schröder. I
" "	"	1.502	
Ammonium hydrogen oxalate.	$Am H C_2 O_4 . H_2 O$	1.563, m. of 3	Playfair a M. C. S.
" " "	"	1.556	Schiff. J.
Ammonium quadroxalate	$Am H_3 (C_2 O_4)_2 . H_2 O$	1.589, m. of 2	Playfair a M. C. S.
" "	"	1.607	Schiff. J.
Silver oxalate	$Ag_2 C_2 O_4$	4.96, 10°	Husemann.
" "	"	5.005, 4°, ppt.	Schröder. 849.
" "	"	5.029, 4°, cryst.	
Thallium oxalate	$Tl_2 C_2 O_4$	6.31	Lamy and zeaux. 442.
Thallium hydrogen oxalate.	$Tl H C_2 O_4 . H_2 O$	3.971	"
Zinc oxalate	$Zn C_2 O_4$	2.547, 18°.3	Wilson.
" "	"	2.562, 24°.5	
" "	"	2.582, 17°.5	
Cadmium oxalate	$Cd C_2 O_4$	3.310, 17°	Freeman.
" "	"	3.320, 18°	
Calcium oxalate	$Ca C_2 O_4$	2.10[illegible]	Schröder. I
" "	"	2.181, 4°	Schröder. 561.
" "	"	[illegible], 4°	
" "	"	[illegible], 4°	
Barium oxalate	$Ba C_2 O_4$	[illegible]	Schweitzer sity of special p
Lead oxalate	$Pb C_2 O_4$	[illegible]	Schröder. I
		[illegible]	
Manganese oxalate	[illegible]	[illegible]	Freeman.
		[illegible]	
		[illegible]	
Humboldtine	[illegible]	[illegible]	Dana's Mi
		[illegible]	
Nickel oxalate	[illegible]	[illegible]	Freeman.
		[illegible]	
		[illegible]	
Cobalt oxalate	[illegible]	[illegible]	"
		[illegible]	

NAME.	FORMULA.	SP. GRAVITY.	AUTHORITY.
Strontium tartrate	$Sr C_4 H_4 O_6 . 4 H_2 O$	1.972, 18°.1	Joslin. F. W. C.
Barium tartrate	$Ba C_4 H_4 O_6$	2.965, 21°.5	" "
" "	"	2.974, 21°.9	
" "	"	2.980, 20°.8	
Lead tartrate	$Pb C_4 H_4 O_6$	3.998, 16°.5	" "
" "	"	4.001, 17°.5	
" "	"	4.037, 17°.7	
Potassium tartrantimonite, or tartar-emetic	$2 K C_4 H_4 Sb O_7 . H_2 O$	2.5569	Pasteur. Ann. (3), 28, 86.
" "	"	2.607	Schiff. J. 12, 16.
" "	"	2.588	Buignet. J. 14, 15.
" "	"	2.597	Topsoë and Christiansen.
Ammonium tartrantimonite.	$2 Am C_4 H_4 Sb O_7 . H_2 O$	2.324	Topsoë. C. C. 4, 76.
Silver tartrantimonite	$Ag C_4 H_4 Sb O_7$	3.4805, 18°.2	Evans. F. W. C.
Thallium tartrantimonite	$2 Tl C_4 H_4 Sb O_7 . H_2 O$	3.99	Lamy and Des Cloizeaux. Nature, 1, 142.
Barium tartrantimonite	$Ba (C_4 H_4 Sb O_7)_2 . 2 H_2 O$	3.112, 19°	Joslin. F. W. C.
Potassium borotartrate	$K C_4 H_4 B O_7$	1.832	Buignet. J. 14, 15.
Potassium racemate	$K_2 C_4 H_4 O_6 . 2 H_2 O$	1.58	Mitscherlich.
Potassium hydrogen racemate.	$K H C_4 H_4 O_6$	1.954	Wyrouboff. B. S. M. 6, 311.
Potassium lithium racemate.	$K Li C_4 H_4 O_6$	1.610	Wyrouboff. B. S. M. 6, 53.
Potassium sodium racemate.	$K Na C_4 H_4 O_6 . 3 H_2 O$	1.783	Wyrouboff. B. S. C. 45, 52.
Rubidium racemate	$Rb_2 C_4 H_4 O_6$	2.640	Wyrouboff. Bei. 8, 24.
Rubidium hydrogen racemate.	$Rb H C_4 H_4 O_6$	2.282	Wyrouboff. B. S. M. 6, 311.
Rubidium lithium racemate.	$Rb Li C_4 H_4 O_6$	2.192	Wyrouboff. Bei. 8, 24.
Ammonium racemate	$Am_2 C_4 H_4 O_6$	1.601	Wyrouboff. B. S. M. 9, 102.
Ammonium hydrogen racemate.	$Am H C_4 H_4 O_6$	1.636	Wyrouboff. B. S. M. 6, 311.
Ammonium sodium racemate.	$Am Na C_4 H_4 O_6 . H_2 O$	1.740	Wyrouboff. Ann. (6), 9, 221.
Silver racemate	$Ag_2 C_4 H_4 O_6$	3.7752	Liebig and Redtenbacher. A. C. P. 38, 139.
Thallium racemate	$Tl_2 C_4 H_4 O_6$	4.783, 15°	Two varieties. Wyrouboff. B. S. M. 9, 102.
" "	"	4.803, 15°	
" "	$2 Tl_2 C_4 H_4 O_6 . H_2 O$	4.659	Lamy and Des Cloizeaux. Nature, 1, 142.
Thallium hydrogen racemate.	$Tl H C_4 H_4 O_6$	3.494	Wyrouboff. B. S. M. 6, 311.
Thallium lithium racemate.	$Tl Li C_4 H_4 O_6 . 2 H_2 O$	3.144	Wyrouboff. Ann. (6), 9, 221.
Thallium sodium racemate	$Tl Na C_4 H_4 O_6 . 2 H_2 O$	3.289	" "

NAME.	FORMULA.	SP. GRAVITY.	AUT[HORITY]
Sodium tartrate	$Na_2 C_4 H_4 O_6 . 4 H_2 O$	1.794	Buignet
Potassium tartrate	$K_2 C_4 H_4 O_6$	1.975	Schiff.
" "	$K_2 C_4 H_4 O_6 . H_2 O$	1.960	Buignet.
Potassium hydrogen tartrate.	$K H C_4 H_4 O_6$	1.948	Schabus.
" " "	"	1.978	Schiff.
" " "	"	1.956	Buignet.
Ammonium tartrate	$Am_2 C_4 H_4 O_6$	1.566	Schiff.
" "	"	1.523	Buignet.
" "	"	1.601	Wyroub[oﬀ] 24.
Ammonium hydrogen tartrate.	$Am H C_4 H_4 O_6$	1.680	Schiff.
Sodium potassium tartrate	$Na K C_4 H_4 O_6 . 4 H_2 O$	1.74	Mitscher[lich]
" " "	"	1.767	Schiff.
" " "	"	1.790	Buignet.
" " "	"	1.77	W. C. [...] J. P. [...]
Sodium ammonium tartrate.	$Na Am C_4 H_4 O_6 . 4 H_2 O$	1.58	Mitscher[lich]
" " "	"	1.576	Pasteur.
" " "	"	1.587	Schiff.
Potassium ammonium tartrate.	$K Am C_4 H_4 O_6 . 4 H_2 O$	1.700	"
Rubidium tartrate	$Rb_2 C_4 H_4 O_6$	2.692	Wyroub[oﬀ] 24.
" "	$Rb_2 C_4 H_4 O_6 . H_2 O$	2.584	Wyroub[oﬀ] M. 6, [...]
Rubidium hydrogen tartrate.	$Rb H C_4 H_4 O_6 . \frac{1}{2} H_2 O$	2.399	"
Rubidium lithium tartrate	$Rb Li C_4 H_4 O_6 . H_2 O$	2.281	Wyroub[oﬀ] M. 6, [...]
Rubidium sodium tartrate	$Rb Na C_4 H_4 O_6 . 2\frac{1}{2} H_2 O$	2.200	Wyroub[oﬀ] (6), 9, [...]
Silver tartrate	$Ag_2 C_4 H_4 O_6$	3.4321	Liebig an[d ...]bacher. 88, 1[...]
Thallium tartrate	$Tl_2 C_4 H_4 O_6$	5.110	Wyroub[oﬀ] M. 6, [...]
" "	$Tl_2 C_4 H_4 O_6 . \frac{1}{2} H_2 O$	4.658	Lamy and [Des Clo]zeaux. 1, 142.
" "	"	4.740	Wyroub[oﬀ] M. 9, [...]
Thallium hydrogen tartrate.	$Tl H C_4 H_4 O_6$	3.496	Lamy and [Des Clo]zeaux. 142.
" " "	$Tl H C_4 H_4 O_6 . \frac{1}{2} H_2 O$	3.399	Wyroub[oﬀ] 6, 311.
Thallium lithium tartrate	$Tl Li C_4 H_4 O_6 . H_2 O$	3.356	Wyroub[oﬀ] 6, 58.
Thallium sodium tartrate	$Tl Na C_4 H_4 O_6 . 2\frac{1}{2} H_2 O$	3.120	Wyroub[oﬀ] (6), 9, [...]
Strontium tartrate	$Sr C_4 H_4 O_6$	2.575, 17°.3	Joslin.
" "	"	2.579, 17°.1	
" "	"	2.593, 17°.4	
" "	$Sr C_4 H_4 O_6 . 4 H_2 O$	1.961, 19°	"
" "	"	1.966, 19°.2	

Name.	Formula.	Sp. Gravity.	Authority.
...um tartrate	$SrC_4H_4O_6 . 4H_2O$	1.972, 18°.1	Joslin. F.W.C.
... tartrate	$BaC_4H_4O_6$	2.965, 21°.5	" "
"	"	2.974, 21°.9	" "
"	"	2.980, 20°.8	" "
...rtrate	$PbC_4H_4O_6$	3.998, 16°.5	" "
"	"	4.001, 17°.5	" "
"	"	4.037, 17°.7	" "
...sium tartrantimonite, or tartar-emetic	$2KC_4H_4SbO_7 . H_2O$	2.5569	Pasteur. Ann. (3), 28, 86.
" "	"	2.607	Schiff. J. 12, 16.
" "	"	2.588	Buignet. J. 14, 15.
" "	"	2.597	Topsoë and Christiansen.
...nium tartrantimo-...	$2AmC_4H_4SbO_7 . H_2O$	2.324	Topsoë. C. C. 4, 76.
...artrantimonite	$AgC_4H_4SbO_7$	3.4805, 18°.2	Evans. F. W. C.
...m tartrantimonite	$2TlC_4H_4SbO_7 . H_2O$	3.99	Lamy and Des Cloizeaux. Nature, 1, 142.
... tartrantimonite	$Ba(C_4H_4SbO_7)_2 . 2H_2O$	3.112, 19°	Joslin. F. W. C.
...um borotartrate	$KC_4H_4BO_7$	1.832	Buignet. J. 14, 15.
...um racemate	$K_2C_4H_4O_6 . 2H_2O$	1.58	Mitscherlich.
...um hydrogen race-...	$KHC_4H_4O_6$	1.954	Wyrouboff. B.S.M. 6, 311.
...um lithium race-...	$KLiC_4H_4O_6$	1.610	Wyrouboff. B.S.M. 6, 53.
...um sodium race-...	$KNaC_4H_4O_6 . 3H_2O$	1.783	Wyrouboff. B.S.C. 45, 52.
...um racemate	$Rb_2C_4H_4O_6$	2.640	Wyrouboff. Bei. 8, 24.
...um hydrogen race-...	$RbHC_4H_4O_6$	2.282	Wyrouboff. B.S.M. 6, 311.
...um lithium race-...	$RbLiC_4H_4O_6$	2.192	Wyrouboff. Bei. 8, 24.
...nium racemate	$Am_2C_4H_4O_6$	1.601	Wyrouboff. B.S.M. 9, 102.
...nium hydrogen ...mate.	$AmHC_4H_4O_6$	1.636	Wyrouboff. B.S.M. 6, 311.
...nium sodium race-...	$AmNaC_4H_4O_6 . H_2O$	1.740	Wyrouboff. Ann. (6), 9, 221.
...racemate	$Ag_2C_4H_4O_6$	3.7752	Liebig and Redtenbacher. A. C. P. 38, 139.
...m racemate	$Tl_2C_4H_4O_6$	4.783, 15°	Two varieties. Wyrouboff. B.S.M. 9, 102.
"	"	4.803, 15°	Two varieties. Wyrouboff. B.S.M. 9, 102.
"	$2Tl_2C_4H_4O_6 . H_2O$	4.659	Lamy and Des Cloizeaux. Nature, 1, 142.
...m hydrogen race-...	$TlHC_4H_4O_6$	3.494	Wyrouboff. B.S.M. 6, 311.
...m lithium race-...	$TlLiC_4H_4O_6 . 2H_2O$	3.144	Wyrouboff. Ann. (6), 9, 221.
...m sodium racemate	$TlNaC_4H_4O_6 . 2H_2O$	3.289	" "

APPENDIX.

NOTE ON THE SPECIFIC GRAVITY OF WOOD.

Although wood is a substance which does not come within the scope of these tables, the following references to literature are given as a matter of convenience.

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Many figures are also given in Böttger's "Tabellarische Uebersicht."

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INDEX

TO THE

LITERATURE

OF THE

SPECTROSCOPE.

ALFRED TUCKERMAN, PH. D.

WASHINGTON:
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ADVERTISEMENT.

With the rapid accumulation of scientific memoirs and discussions, published from year to year in numerous journals and society proceedings, a constantly larger expenditure of time and labor is required by both the investigator and the student, to learn the sources of information and the condition of discovery in any given field. Hence is felt the growing need of classified indexes to the work done in the various fields of research, and hence the corresponding tendency of the age to supply such demand.

The present work aims at a general survey of Spectroscopic Literature, with references to authorities in its more special subdivisions, and it has been prepared for the Institution by Mr. Tuckerman, without other remuneration than the expectation of serving the interests of scientific inquirers.

It has been brought down to the middle of the year 1887.

S. P. LANGLEY,
Secretary Smithsonian Institution.

WASHINGTON, *February*, 1888.

PREFACE.

This work is intended to be a list of all the books and smaller treatises, especially contributions to scientific periodicals, on the spectroscope and spectrum analysis from the beginning of our knowledge upon the subject until July, 1887; an Index or Bibliography of the Spectroscope and Spectrum Analysis.

It was begun at the suggestion of Dr. Wolcott Gibbs, whose work in connection with the subject is well known.

The object is to enable a chemist to find out at a glance all that has been published in any branch of his subject where the spectroscope is used, and what every writer has published.

The method pursued has been as follows: 1, to examine the bibliographies, booksellers' catalogues, and books on spectrum analysis for books; 2, to examine the scientific periodicals for the shorter treatises, the first and original contributions to the subject, and this was done volume by volume wherever there was no index to a series of years—as in the Comptes Rendus and the later volumes of the Annales de Chemie et de Physique and of (Poggendorff's, now Wiedemann's) Annalen der Physik und Chemie, as well as others. Use was made of the bibliography at the end of Roscoe's Spectrum Analysis, and in the reports of the British Association for 1881 and 1884, for such books and articles as the author could not find elsewhere. Credit is also due to the Astor Library and its managers for the means it afforded the author of making this Index.

After the greater part of the material was collected it was divided into such subjects as the titles indicated, in alphabetical order, easy finding being constantly kept in view. Titles have often been repeated more than once so as to make sure of their being found. Finally, at the suggestion of the Smithsonian Institution, the List of Authors was added.

The author hopes that his two objects, fullness and ready access of all the titles, will prove to have been gained.

NEW YORK, 1887.

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(Look under Electricity.)

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Fievez (Ch.). F. Hayez, Bruxelles, 1883, 4°. Extrait des Annales de l'Observatoire royal de Bruxelles, n. sér., t. V. Avec deux planches.
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Mascart (E.). Extrait des Annales scientifiques de l'École nor
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Recherches sur la détermination des longueurs d'onde.

Mascart (E.). Paris, Gauthier-Villars, 1866, 4°. Extrait des An
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Thalén (Rob.). Upsal., W. Schultz, 1868, 4°. Mit zwei Tafeln.
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(Gives the wave-lengths of the bright rays of the metals.)

Le spectre d'absorption de la vapeur d'iode.

Thalén (Rob.). Upsal., Ed. Berling, 1869, 4°. Avec trois planches

[Thollon's map of the solar spectrum is in Vol. I of the Annales
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smaller map or sheets of the group B.]

MERCURY.

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Conroy (Sir J.). Proc. Royal Soc., 28, 244.

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Jahresber. d. Chemie, **15**, 31, 32.

Constanz der Metallspectren.

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